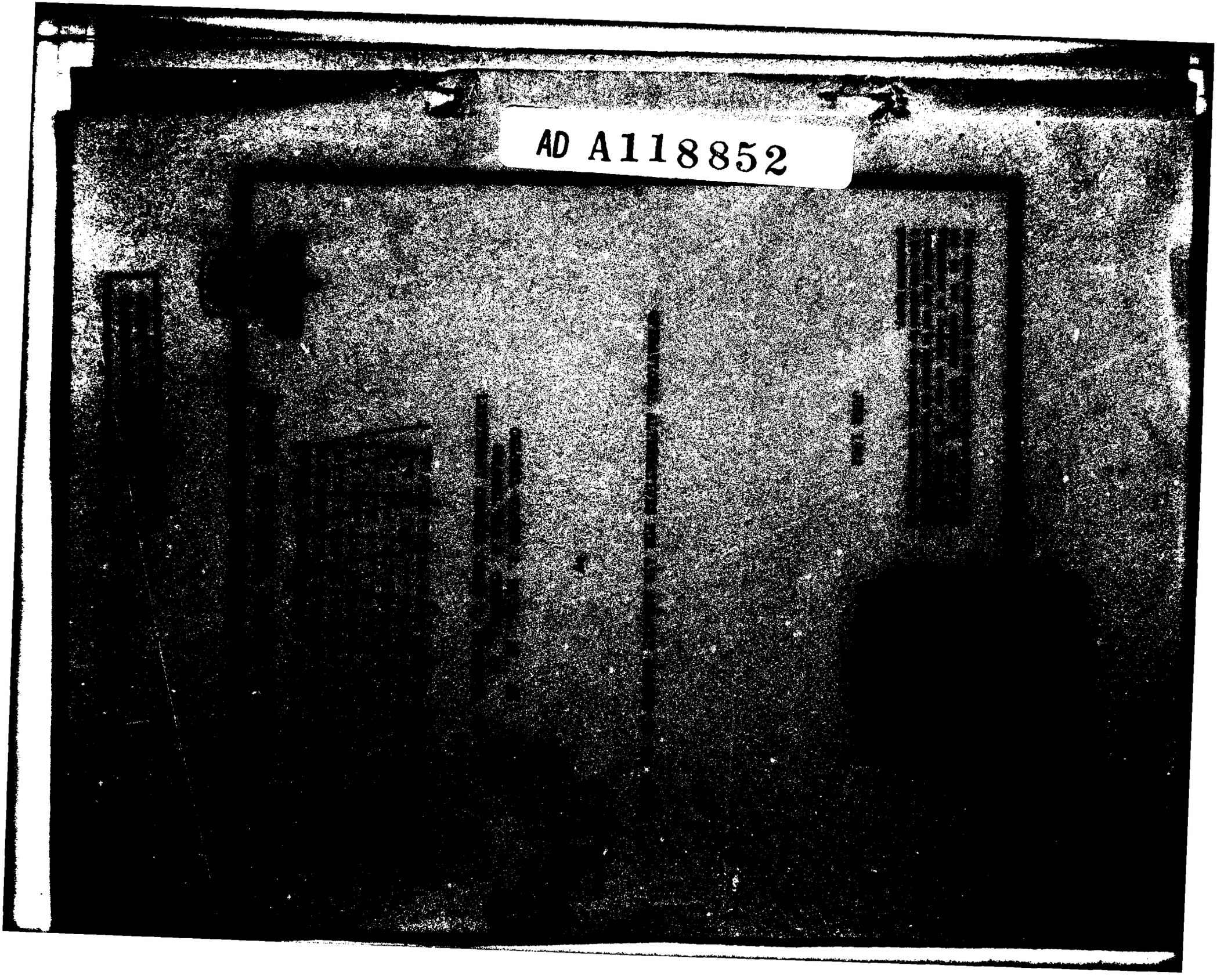
AD-A118 852 ARMY WAR COLL CARLISLE BARRACKS PA F/G 5/1
OPERATIONAL ALTERNATIVES FOR AIR ASSAULT FORCES IN THE 1990S.(U)
JUN 82 V E MICOL, D H CAMPBELL, D A BRAMLETT

UNCLASSIFIED NL



SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. AD-A118852	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Operational Alternatives for Air Assault Forces in the 1990s		5. TYPE OF REPORT & PERIOD COVERED Study Project
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Victor E. Micol, Jr. Colonel IN Dan H. Campbell, Colonel IN David A. Bramlett, Lieutenant Colonel		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army War College Carlisle Barracks, PA 17013		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE June 1982
		13. NUMBER OF PAGES 121
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)
Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
The focus is on the proper operational alternatives for air assault forces in the 1990s. Operational alternatives are examined in the areas of force packages and packaging, strategic deployment considerations, and tactical employment options. Data were collected using both offical and unofficial literature and from personal interviews with planners and operators associated with air assault forces and their uses. Emerging Army operational concepts in the new FM 100-5 (Final Draft, 15 Jan 82)

Cont'd

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Item 20 (Continued)

and the Airland Battle 2000 concepts mandate a rexamination of existing and projected forces and their proper application consistent with mobile, maneuver-oriented offensive notions. Four alternatives in force packaging are examined; the various deployment requirements for air assault forces are measured in terms of strategic airlift sorties, sealift hulls, and combinations of airlift and sealift assets; employment options are evaluated in their historic and current contexts and projected into the 1990s using the parameters of vulnerability and survivability in determining a priority for employment. The study concludes that air assault forces are vital component in the emerging operational concepts and that there are preferred courses of action to be pursued in the areas of force packaging, strategic deployment, and tactical employment. The Army staff should take the following actions: retain the air assault division; create discrete air assault brigades within existing light infantry divisions; target air assault brigade task forces to contingency missions listed in Chapter V and discussed in Chapter III; employ air assault forces in the tatical missions, listed in Chapter V and discussed in Chapter IV.

US ARMY WAR COLLEGE

MILITARY STUDIES PROGRAM PAPER

OPERATIONAL ALTERNATIVES FOR AIR ASSAULT FORCES IN THE 1990s

BY

COLONEL VICTOR E. MICOL, JR., IN
COLONEL DAN H. CAMPBELL, IN
LIEUTENANT COLONEL DAVID A. BRAMLETT, IN

COLONEL WILLIAM R. WILLIAMSON
STUDY ADVISOR

7 JUNE 1982

TABLE OF CONTENTS

ABSTRACT

AUTHORS: Victor E. Micol, Jr., COL, IN; Dan H. Campbell, COL, IN; David A. Bramlett, LTC, IN.

TITLE: Operational Alternatives for Air Assault Forces in the 1990s

FORMAT: Group Study Project

DATE: 1 June 1982 PAGES: 121 CLASSIFICATION: Unclassified

The focus is on the proper operational alternatives for air assault forces in the 1990s. Operational alternatives are examined in the areas of force packages and packaging, strategic deployment considerations, and tactical employment options. Data were collected using both official and unofficial literature and from personal interviews with planners and operators associated with air assault forces and their uses. Emerging Army operational concepts in the new FM 100-5 (Final Draft, 15 Jan 82) and the Airland Battle 2000 concepts mandate a reexamination of existing and projected forces and their proper application consistent with mobile, maneuver-oriented offensive notions. Four alternatives in force packaging are examined; the various deployment requirements for air assault forces are measured in terms of strategic airlift sorties, sealift hulls, and combinations of airlift and sealift assets; employment options are evaluated in their historic and current contexts and projected into the 1990s using the parameters of vulnerability and survivability in determining a priority for employment. The study concludes that air assault forces are a vital component in the emerging operational concepts and that there are preferred courses of action to be pursued in the areas of force packaging, strategic deployment, and tactical employment. The Army staff should take the following actions: retain the air assault division; create discrete air assault brigades within existing light infantry divisions; target air assault brigade task forces to contingency missions listed in Chapter V and discussed in Chapter III; employ air assault forces in the tactical missions listed in Chapter V and discussed in Chapter IV.

PREFACE

This Group Study Project was produced under the aegis of the Department of Military Strategy, Plans, and Operations of the US Army War College. The scope and general methodology were outlined by the Department. This research paper is designed to contribute to the current and anticipated response to the Army's emerging FM 100-5 doctrine and the AirLand Battle 2000. The three authors of this study elected to participate based on their past experience and continuing interest in air assault operations. This analysis recognizes existing concepts and ideas, but the conclusions and recommendations are not constrained by currently programmed plans or projections. The authors acknowledge a professional debt of gratitude to the Army War College for this opportunity for research, travel, and analysis.

EXECUTIVE SUMMARY

This five chapter study analyzes three components of operational alternatives for air assault forces in the 1990s. In each component area the study identifies key issues, examines salient features in each, and presents conclusions. The final chapter contains recommendations that answer the study's problem statement of what are the operational alternatives for air assault forces in the 1990s.

The introductory chapter provides vital background:

- Identifies the demands of FM 100-5 (Final Draft, 15 Jan 82) for maneuver-oriented doctrine and tactics.
- Notes the expectations of Airland Battle 2000 in terms of mobile, self-sufficient forces.
- Differentiates along the same tactical continuum between the relatively complex and bold air assault operation and the less ambitious airmobile operation.

Chapter II examines the alternatives available in force packaging air assault forces within the constraints of zero sum changes in the current and projected force structures. Alternatives examined are:

- Retain the Status Quo (as in ARCSA III).
- Implement Division 86 Adjustments.
- Form Separate Air Assault Brigades.
- Eliminate Air Assault Units Per Se.

The analysis concludes that the air assault differential is crucial, that only the air assault division currently has a standing air assault capability, that light infantry divisions have the air assault potential but not the capability, and that force package changes can achieve a significantly expanded air assault capability.

Chapter III presents a reasoned analysis on the increasing importance of air assault forces as a principal asset for strategic power projection. This notion of strategic deployment is further defined in terms of force packages and their deployment costs in terms of strategic lift. The chapter examines strategic lift costs for battalion task force through division:

— USAF airlift (C5A/C141B): 4/62 sorties for battalion task force; 12/188 sorties for brigade task force; 76/858 for air assault division.

— USN sealift: One Lighter Aboard Ship (LASH) or one Sea Barge ship for a battalion task force; three Sea Barge ships for a brigade task force; one RO/RO ship, one container ship, and three Sea Barge ships for an air assault division. In all cases, the troops would deploy in passenger aircraft.

— Hybrid (USAF,USN): 37 C141A sorties and one Sea Barge ship for a brigade task force; 43 C5A sorties, 229 C141A sorties, one RO/RO, and one Sea Barge ship for the division.

The study further analyzes the increasingly important self-deployment capabilities of the helicopters, particularly with notions of intratheater mobility. The chapter concludes that multiple brigade task forces are most appropriately deployed by a hybrid of USAF airlift and USN sealift. A single brigade task force, if deemed to be sufficient for the mission, is comparatively easily deployed solely by USAF airlift.

Chapter IV surveys the tactical evolution of air assault forces and projects a priority for employment and missions when analyzed against the vulnerabilities and survivability of the force on the battlefield of the 1990s. Conclusions reflect an optimum priority that considers suitability and not necessarily likelihood; the priority is:

— Low-intensity, third world contingencies.

— Mid-intensity, third world and developing or developed world contingencies.

— Mid-high intensity, NATO commitment.

Chapter V, Recommendations, offers among others the following key actions to be taken:

— Create discrete (as different from separate) air assault brigades in all existing light infantry divisions by attaching or placing OPCON the combat aviation battalion to a designated maneuver brigade.

— Deploy brigade task forces to contingencies in following priority:

  o Low-intensity, third world.

  o Mid-intensity, third world and developing or developed world.

  o Mid-high intensity, NATO commitment.

— Deploy brigade task forces in the following fashion:

  - o Single brigade task force by USAF airlift.
  - o Multiple brigade task forces by hybrid of USAF, USN assets.

— Employ air assault forces in following priority:

  - o Low-intensity, third world: full range of offensive operations from company team to battalion task force.
  - o Low-intensity, third world and developing or developed world: show of force at brigade level, raids at company and battalion level, and rear area combat operations (RACO) at company and battalion level.
  - o Mid-high intensity, NATO commitment: raids at company and battalion level; RACO at company and battalion level.

— Direct a study group to address the steps necessary to upgrade the tactical and technical proficiency of Army aviators in order to transfer the burden of air assault operations expertise to aviation.

There are other recommendations that amplify and complement these summarized recommendations.

CHAPTER I

INTRODUCTION

With the publication of the new FM 100-5, Operations (Final Draft, dated 15 January 1982), the Army has formally announced an operational concept that presents "the sum total of the ideas that underlie the way it fights its battles and concepts."[1] This new FM 100-5 stresses, if not reintroduces, the importance of maneuver and offensive action as essential components of the Army's operational concept. The AirLand Battle subsumes a host of preceeding, interrelated tactical and operational applications -- the integrated battlefield, the central battle, the extended battlefield, the Active Defense[2] -- into a coherent doctrinal framework for fighting on the battlefields through the 1990s. Not accidentally, the Army is projecting beyond this operational doctrine forward to a follow-on concept called AirLand Battle 2000, "a conceptual blueprint of how soldiers will be employed and equipped for combat during the years 1995 through 2015."[3] As FM 100-5 and the AirLand Battle permeate the Army in the Field, the forces in being must accept the challenge of implementing these concepts and principles both tactically and operationally. In addition, the emergence of the AirLand Battle 2000 concept serves as a more distant beacon as this implementation progresses from theory and doctrine to practical application. Among the combat forces, the air assault force warrants special examina-

tion in the context of an emerging doctrine that so emphasizes the importance of maneuver and offensive action.

BACKGROUND

A new lexicon emerges with FM 100-5. Terms such as nonlinear battles, the air dimension, and air maneuver units all connote a fluid, mobile battlefield that includes two distinct dimensions -- the ground and the air. The nonlinear battle recognizes that "linear warfare will most often be a temporary condition at best and distinctions between rear and forward areas will be blurred,"[4] and that the discontinuous, disjointed battlefield will be the norm with maneuver among the discontinuities being a prerequisite to success. Consistent with this notion is the formal recognition by Army planners of the air dimension, a medium in which "air mobility and airpower will extend the battle to new depths for both combatants."[5] The term air maneuver units is a new generic expression that encompasses airborne, airmobile, air assault, air cavalry, and attack helicopter units operating either independently or in a task force configuration involving two or more of the type units. Throughout FM 100-5 there are repeated references to various air maneuver units and their prominent roles in the conduct of tactical operations conducted within the context of this announced, formalized operational concept.

Tenets and imperatives of the AirLand Battle have evolved from the standing, traditional store of operational and tactical principles. FM 100-5 identifies four basic tenets and seven imperatives of modern combat, many of which reinforce a commitment to the need for and primacy of maneuver and offensive action. Among these announced tenets and imperatives are several that are perhaps most advantageously fulfilled

by the application and potential of air maneuver units. Of the four basic tenets of initiative, depth, agility, and synchronization, both depth and synchronization have particular application for air maneuver forces.

- — Depth. This notion connotes the need for fighting the deep battle on the extended battlefield and implies the requirement that the commander possess those assets necessary to project his influence.
- — Synchronization. A derivative and refinement of coordination, this term recognizes the synergistic effects of properly coordinating a variety of maneuver and fire support assets at a precise moment and location to achieve a geometrical rather than arithmetical effect on the enemy. Air maneuver units possess the capability to synchronize their effect(s) laterally and in depth with a rapidity unmatched by ground maneuver units.

Among the seven listed imperatives of modern combat is the exhortation to "move fast, strike hard and finish rapidly."[6] Air maneuver units possess the inherent capability to move faster and finish more rapidly than other units; and to differing degrees, each of the air maneuver units has the ability to strike hard within the limitations of its particular armament.

This operational concept, the AirLand Battle, is a response to the battlefield shaped by the current state-of-the-art and trends of the 1980s and the informed projections for the 1990s. The 1990s will see a battlefield that both extends the realities of the 1980s and fulfills more completely the trends that have emerged.

- US forces will continue to be substantially outmanned by their principal adversary.
- Sophistication and complexity will increase in technology and weapons, with the concomitant enhanced lethality.
- Smaller, mobile forces will be the standard.
- Tactical and strategic mobility will be paramount, with both intertheater and intratheater considerations.[7]
- Boldness, surprise, and risk-taking will be characteristics of the successful commander.
- Increased emphasis on precision will characterize the planning and execution of tactical operations; the premium will rise on synchronization.
- Targets will be found throughout the battlefield from the forward edge to the depths of the extended battlefield, with the enemy's nodal points of command, communications, and logistics becoming lucrative objectives for the commander's deep-reaching assets.[8]

Similarly, much of the equipment that is fielded or being fielded today will be on that battlefield of the 1990s. Within the tactical air maneuver units (excluding USAF aircraft) will be four basic aircraft: the UH60 (BLACKHAWK) utility helicopter; the AH64 (APACHE), Advanced Attack Helicopter (AAH); the CH47D (CHINOOK) medium lift helicopter; and the OH58C (KIOWA), Advanced Helicopter Improvement Program (AHIP).[9] The increased capabilities of these four helicopters suggest potential for varied and innovative employments. The challenge for the practitioner of tactics and operations is to realize fully the potential that new equipment brings to the unit and the battlefield. Thus, in a very real sense, the Army has articulated a doctrine that places identified

requirements on its forces. These concepts based requirements[10] are structural and tactical challenges that the Army in the Field must answer through the adroit analysis, evaluation, and adjustment of its forces and tactics to fulfill these doctrinal precepts.

Impact of AirLand Battle 2000. As mentioned above, the Army is already articulating an operational concept for the next century. This concept is a logical extension of the AirLand Battle doctrine announced in FM 100-5 as this follow-on concept identifies the type of structural adjustments and functional requirements that will fulfill these doctrinal principles. Assuredly, much of the evolving AirLand Battle 2000 is speculative and not prescriptive, but the orientation is clear. The focus is on the "AirLand Battlefield of 1995 and beyond [that] requires exceptional mobility for all combat and support air and land vehicles."[11] The structural keystone in the concept is a close combat force that "is highly mobile and self-sufficient, and can operate independently."[12] This close combat force is the tactical building block for larger forces, which are themselves merely collections of close combat forces tailored in quantity for the mission. The close combat forces are further visualized to be "self-sufficient forces comprised of an optimal mix of organic and attached combat, combat support, and combat service support elements"[13] (emphasis added). This evolving concept of mobile, self-contained forces fighting throughout an extended, discontinuous battlefield is a vital backdrop to those discussions and decisions relating to operational and tactical considerations for the forces in being in the 1990s.

STATEMENT OF THE PROBLEM

FM 100-5 is the capstone manual of operational doctrine. With its explicit requirements for tactical and structural accommodation, what are the operational alternatives for air assault forces in the 1990s in terms of force packaging, strategic deployment, and tactical employment that best fulfill not only the doctrine of FM 100-5 but also the expectations of AirLand Battle 2000?

This study examines the full range of operational alternatives for those forces that use the helicopter as a principal means of mobility in the conduct of combat operations. The focus is exclusively on the air assault or airmobile force that employs troops, helicopters, and supporting fires, both ground-mounted and heliborne, in a combined arms fashion. The study stipulates that the helicopter, as an entity, is an accepted system in the arsenal and operational doctrines of modern armies. Generally accepted roles include tactical and administrative transport, and weapons system platform. At issue is the optimum configuration and use of the combined arms force that contains ground troops and assault helicopters at its nucleus.

AIR ASSAULT/AIRMOBILE CONTINUUM

The combination of troops and assault helicopters[14] has produced two terms that occur within this continuum of helicopter operations: airmobile and air assault. Though the two terms are not mutually exclusive in that both may involve the same components, there is a fundamental distinction between the two concepts — a distinction that hinges on time available and routine execution.

FM 90-4, Airmobile Operations explicitly recognizes this differen-

tial:

> A primary consideration is that infantry units (except air assault units) do not habitually conduct airmobile operations. They require time to train and develop coordination between ground and aviation units.[15]

Official publications frequently differentiate between airmobile and air assault as does the leadership throughout the Army.[16] The air assault is both explicitly and implicitly a more complex and sophisticated operation, and it carries the accompanying burden of requiring boldness and risk-taking by the commander. Though the air assault done poorly may have catastrophic results, the additive effect of a successful air assault within the context of a larger operation may indeed be the catalyst that produces the tactical synergism sought by all commanders in the employment of their forces. Understanding and weighing the distinction and differences are vital adjuncts to evaluating the problem and thesis of the study. An overview summary of the differences between air assault and airmobile includes:

AIR ASSAULT	AIRMOBILITY
Routine linkage between air and ground forces providing continuous integrated fire and maneuver in tactical operations.	Infrequent linkage between air and ground forces in tactical operations.
Highly responsive	Unresponsive
Combat team stressing high speed operations.	Transportation
Chain of command organized for sustained operations.	Ill-defined chain-of-command for long term combat operations.[17]

The 101st Airborne Division (AASLT) How to Fight manual defines air assault as:

> . . . the total integration of the helicopter assets in their various roles as troop and logistical transport, reconnaissance vehicle, and fire support platform with the other com-

> bat, combat support, and combat service support elements . . . in the routine execution of combat operations.[18]

One senior officer in the air assault division further defines air assault in the vital area of command and control:

> In the modern air assault concept there is routine linkage between air and ground forces providing continuous integrated fire and maneuver in tactical operations. Air assault helicopters are highly responsive. Combat teams stress high speed operations. The chain of command is organized for sustained operations. In other words, Air Assault stresses total command and control of all our combined arms assets. Air mobility is just a ride to work.[19]

This continuous command control of the means of maneuver (not simply the existence of maneuver potential) may be considered a defining element of tactical air assault operations. The habitual association and routine linkage between the helicopter assets and other combined arms elements produce another defining element of the present air assault concept.

FM 90-4 notes that airmobile operations are "characterized by careful planning and deliberate, bold, and violent execution,"[20] and that

> Airmobile operations will have to be conducted with speed, secrecy and precision by a well-trained, highly proficient combined arms team. To gain that proficiency, individuals and units must train in airmobile operations prior to being committed to combat.[21]

Both airmobile and air assault operations involve identifiable planning and training requirements to accomplish the ground tactical plan, landing plan, air movement plan, loading plan, and staging plan. Differences continue to turn on the fact that air assault forces execute as a matter of routine whereas airmobile forces require considerable training to reach a comparable state of proficiency. Official publications frequently define airmobile operations similarly to that above definition assigned to air assault operations, though even FM 90-4 explicitly recognizes the two terms separately and acknowledges that they are not synonyms. The operations differ in complexity with the air

assault operation being the more demanding, the more difficult, and potentially the more decisive and productive. Certainly, the airmobile force can be trained to the standard of the air assault force. Indeed, the planning time necessary for an airmobile force to execute complex, bold air assault operations with their accompanying risks can be reduced by training and practice as a combined arms team.

However, the complexity and lethality of the battlefield of the 1990s will require extensive planning and training by all participants, but the time may not be available during conflicts. Two clear scenarios pertain: targets and situations will be fleeting with the premium on speed and near-spontaneity of execution, or targets will be continuous and plentiful with a premium on relentless attack. A recurring consideration throughout the study will be the relative advantages of air assault expertise compared to airmobile proficiency when faced with responding to either or both scenarios.

INVESTIGATIVE PROCEDURES

The three authors sought to combine personal experience, existing documentation, and interview commentary from the Army in the Field to provide informed analysis and conclusions.

The composite personal experience of the authors during the period 1976-1981 includes:

- 57 months of air assault battalion command (shared by all three authors)
- Staff duties in an air assault division that include battalion XO, battalion S3, brigade S3, Deputy ACofS G3/DPT, Division Training Officer, and ACofS, G1 (shared

among all three authors)

— Editorship of Air Assault in Action pamphlet produced for Reforger 76 (one author).

— Editorship of 101st Airborne Division (AASLT) 1980 publication, Th Air Assault Battalion Task Force: How to Fight (one author)

— Senior Army Aviator (one author)

— Award of Air Assault Badge (all three authors)

Document search and analysis included all pertinent field manuals with particular attention to FM 100-5, FM 90-4, and those manuals directed in part to air assault or airmobile unit operations. Additionally, selected research included reviews of air assault topics in such periodicals as the International Defense Review, and others that included appropriate material on air assault or airmobile forces. Historical research included a systematic review and analysis of primary writings acknowledged to be standard works in the evolution of air assault and airmobile operations. Unpublished concept papers were also examined, particularly those that reflected prevailing, if not preeminent, thoughts on air assault forces. Based on initial document review and analysis, coupled with the authors' own experience, the group produced an abbreviated working outline that served as a basis for interviews and discussions with selected personnel throughout the Army. These outlines were sent to selected individuals prior to the field interview portion of the research.

Field interviews included visits to key TRADOC and FORSCOM units and agencies. TRADOC posts visited included Ft. Leavenworth, Ft. Benning, Ft. Knox, and Ft. Rucker; FORSCOM units visited included XVIII Airborne Corps, 82nd Airborne Division, and 101st Airborne Division

(AASLT). Additionally, interviewees included members of DA DCSOPS and the JCS. Comments and reactions from the field were then evaluated for and with regard to the final product.

ORGANIZATION/SCOPE

This study analyzes the operational alternatives in three distinct, but interrelated, phases that begin from the premise that FM 100-5 has placed a requirement on the Army to make what adjustments are necessary to fulfill the tactical and structural requirements of the AirLand Battle.

The initial section examines the issue of force packages and packaging for deployment to the real or potential battlefield. As a part of this analysis, the study reviews the four basic options of force packaging that are available without significant changes in the force structure. The four options are:

- Status quo
- Implementation of the Division 86 adjustments
- Formation of separate air assault forces
- Elimination of air assault forces, per se

This portion of the study concludes with the preferred option that best fulfills the requirements of FM 100-5 on the battlefield of the 1990s and acknowledges the derived expectations of the AirLand Battle 2000.

The second phase analyzes the deployment options and considerations that govern the inter- and intratheater movement of air assault or airmobile forces. Among the deployment alternatives are:

- USAF airlift, to include the numbers and types of aircraft needed to move type force packages from the air assault or

airmobile battalion task force through the air assault division.

- Sea lift, to include numbers and types of ships needed to move the cited force packages.
- Hybrid of air lift and sea lift, with the most likely mixes of strategic lift assets for the respective type force packages.
- Self-deployment dimension is a factor for discussion, particularly in an evaluation of intratheater flexibility. Further considerations include the reconfiguration options that materially increase the self-deployment ranges of the utility and medium lift helicopters.

The third portion investigates the employment options on the potential battlefields of the 1990s as these requirements are induced by emerging doctrine and field practice. Air assault forces will be examined within the three identified levels of conflict. Specifically, the chapter focuses on the history, theory, and practical aspects of employing air assault forces and discusses the strengths and vulnerabilities of air assault forces when committed in low, mid, and high intensity conflict environments. The impact of principal inhibitors on helicopter operations is woven into the overall employment discussion. Trends indicating the need for structural changes are also developed in this chapter. This analysis produces a priority for employment of air assault forces that reflects a distillation of capabilities ranging from the company team to the air assault division.

This study concludes with a series of recommendations derived from those conclusions reached in the preceding sections analyzing force packaging, deployment considerations, and employment options.

CHAPTER I

ENDNOTES

1. US Department of the Army, FM 100-5, Operations (Final Draft, dated 15 January 1982), p. 2-1 (hereafter referred to as FM 100-5). This capstone manual has become the seminal document for those charged with operations and tactics. Though cited as the Final Draft, this referenced FM 100-5, dated 15 January 1982, is the second Final Draft, postdating an earlier version of 4 September 1981. The key change appears to be that the 15 January 1982 Final Draft explicitly identifies the AirLand Battle operational concept as an indentifiable, distinct doctrine that underpins operations and tactics. The earlier Final Draft used the AirLand Battle term, but did not focus on it as the governing doctrinal notion that it has become.

2. Though the term, Active Defense, does not occur in the new FM 100-5, it does enjoy widespread currency throughout the Army; and it is indeed a cornerstone of the current FM 100-5 that is not invalidated by the emerging AirLand Battle doctrine of the new FM.

3. Jim Tice, "Army Plans for Year 2000 Battles," Army Times (Washington), 1 March 1982, p. 1 (hereafter referred to as Tice).

4. FM 100-5, p. 1-3.

5. FM 100-5, p. 1-5. Of particular significance in the new FM 100-5 is the numerous, specific inferences to airmobility and air assault (airmobile) forces throughout the manual. Also, the manual carefully distinguishes between air power, the traditional USAF contribution, and airmobility, an Army function involving the helicopter in its manifold applications.

6. FM 100-5, p. 2-14.

7. This strategic mobility issue may be uniquely a US problem, as the US will undoubtedly continue a military strategy of balancing forward deployed forces with strategic, CONUS-located reserves.

8. In a sentence, the battlefield of the 1990s will feature quick, deadly clashes between small units which move rapidly to and from the point of contact.

9. The UH60 has an external lift capacity of 8,000 pounds and can carry eleven combat-equipped soldiers with seats and restraining

belts installed; with the seats and belts removed, the VH60 can carry 20-22 combat-equipped soldiers. The CH47D is product-improved to carry approximately 16,000 pounds. The AH64 can carry 16 TOW missiles or a combination of other armaments at its four firing stations; significantly, it features increased power to offset the density altitude limitations of its predecessor. The OH58C AHIP is product-improved OH58C with a mast-mounted sight being the major improvement.

10. The term "concepts based requirement" is cited by Tice as TRADOCs new program for implementing doctrinal shifts. He notes that the "change here is that weapons and equipment will be designed to accommodate the Army's mission and force structure, rather than the reverse." (p. 1) By logical extension, this system also requires a concomitant adjustment in tactics and extant force structures to accomodate the missions and doctrines that emerge.

11. U.S. Department of the Army, Combined Arms Center and Fort Leavenworth, "AirLand Battle 2000, Annex B: Command and Control Operational Concept," (DRAFT), p. B-2 (hereafter referred to as Annex B).

12. Annex B, p. B-4.

13. U.S. Department of the Army, Combined Arms Center and Fort Leavenworth, "AirLand Battle 2000, Annex C: Close Combat Functional Concept," (DRAFT), p. C-2.

14. The UHI and UH60 aircraft are utility, assault, and transport aircraft. Dependent upon the function, the aircraft are often referred to in generic terms, e.g. assault helicopter during air assault or airmobile operations.

15. US Department of the Army, FM 90-4, Airmobile Operations, p. 3-5 (hereafter referred to as FM 90-4).

16. Based on the field interviews conducted by the authors, there is widespread recognition of a difference in complexity between air assault and airmobile operations. Those interviewed were occasionally imprecise in describing the differences, but a common thread found in many discussions defined airmobile operations as the uncontested repositioning of forces and air assault operations as the combat operation in which enemy contact is integral to the planning.

17. U.S. Department of the Army, 101st Airborne Division (AASLT), "Briefing Chart," Unpublished: March 1982.

18. John N. Brandenburg, MG, Letter Preface to US Department of the Army, 101st Airborne Division (AASLT), The Air Assault Battalion Task Force: How to Fight (hereafter referred to as How to Fight).

19. U.S. Department of the Army, 101st Airborne Division (AASLT), "General Officer Capabilities Speech," p. 1. March 1982 (hereafter referred to as G. O. Speech).

20. FM 90-4, p. 1-1.

CHAPTER II

FORCE PACKAGING AND PACKAGES

Given the necessity of training and/or combining helicopter units with infantry units to form the air assault or airmobile task force, there is an optimum, or most advantageous, organization that attains the desired flexibility, training, and resultant proficiency. These force packages, or organizational alternatives, can be defined in terms of the force structure location of both the helicopter and infantry units, and in their command relations to each other.

CURRENT STATUS

Assault helicopters, UH1 and UH60 series, are found throughout the force structure in both standard and non-standard configurations.[1] The basic structural unit of the assault helicopter fleet is the Combat Support Aviation Company (CSAC) as a part of the Combat Aviation Battalion (CAB). The CSAC is generally standardized throughout the Army, though the composition of the CAB varies with type division and is occasionally removed from direct division control and placed subordinate to an aviation group. There are three separate aviation groups, two in Europe and a third in Korea, with a fourth aviation group organic to the air assault division. This distribution and organization of assault helicopters are results of the current Aviation Requirements for the

Combat Structure of the Army III (ARCSA III). Thus, the current packaging has each light infantry division, to include airborne, with a single, separate CAB consisting of two CSACs and an attack helicopter company in support of the division. The heavy divisions also have a CAB, but it has only a single CSAC but now includes two attack helicopter companies. The air assault division has two CABs, both with three CSACs each, and both subordinate to an aviation group in support of the division; the three attack helicopter companies are found in an Attack Helicopter Battalion (AHB) within the aviation group. In Korea and Europe, each deployed corps has an aviation group in support with each group having at least one CAB with one organic CSAC organic.

CAB Distribution/Organization

Unit	CAB		CSAC*		Atk Hel CO
Lt Inf Div (4)**	1	of	2	+	1
Abn Inf Div (1)	1	of	2	+	1
AASLT Inf Div (1)	2	of	3	+	0
Mech Inf Div (6)	1	of	1	+	2
Arm Div (4)	1	of	1	+	2
AV Gp (s) (3)	1	of	1	+	0

* Each CSAC consists of 20xUH1H or 15xVH60A

** Includes the 9th Infantry Division, though it is currently implementing the Division 86 Air Cavalry Attack Brigade concept.

ALTERNATIVES

There are basically four alternatives that must be examined in the light of the evolving AirLand Battle doctrine and the demands of the battlefields of the 1990s. Each must be examined against mandates of the AirLand Battle with particular attention to the expectations of the imperative to "move fast, strike hard and finish rapidly." The thrust

of this examination is not on tactical tailoring, but rather on force packaging for training and proficiency prior to deployment and the resultant on-site, situation-dependent tactical tailoring.

The alternatives may be summarized as follows:

— Retain the status quo: continue a mix of basically three standard and nonstandard configurations:

  o Individual CABs as parts of separate aviation groups

  o CABs of differing compositions as separate battalions in light infantry, mechanized, and armor divisions

  o CABs within an aviation group organic to a division: the air assault division

— Implement Division 86 adjustments: execute the ARCSA IV plans for Division 86.

  o Creates Air Cavalry Attack Brigades (ACAB) within each division that brings all division aviation under a single command.

  o Creates an Attack Brigade and an Aviation Support Brigade within the air assault division that realigns assets along functional lines, i.e., maneuver or support.

— Form separate or discrete air assault brigades: link existing CABs in the light infantry divisions to infantry brigade headquarters in a command relationship.

— Eliminate air assault units per se: organize air assault task forces on an ad-hoc mission basis with the burden of expertise clearly on the aviation units and commanders, with infantry units already routinely, rather then especially, trained in airmobile tactics and operations.

Implicit in any examination of these four alternatives is the option that a combination of any or all will emerge as the preferred approach. Such a hybrid is not technically an initial option as it evolves only through the discussion and analysis of the four prevalent alternatives that inform the force package alternatives.

The alternatives are fundamentally differentiated in terms of command relationships, not in terms of materially adding or subtracting to the Army-wide force structure; these are zero sum alternatives. Within the alternatives, the CAB, regardless of its CSAC or attack helicopter company composition, is the irreducible building block because of the maintenance requirements precluding decentralization or sustained independent operations below battalion command and control level.[2] An additional consideration that weighs heavily on all alternatives is this crux issue: Does the proficiency level of air assault units, when measured against airmobile forces, warrant the organizational dictates of a specialized unit that may restrict the availability of the Army's limited aviation assets?

ALTERNATIVE #1 — RETAIN THE STATUS QUO

The status quo has evolved through three iterations of the ARCSA. Though the Division 86 plan with its accompanying ARCSA IV program may render this discussion moot, there are elements of Division 86 still subject to change and finalization. Regardless, a thorough discussion and analysis of the working status quo will serve as an understandable base case for a comparison with the other three alternatives. Aspects of the status quo include:

— Individual CAB as part of separate aviation groups in support

of deployed corps (one in Korea; two in Europe).

o Features

* Aviation group exercises routine command and support of the organic CAB and provides general support to the Corps and its subordinate maneuver units.

* CABs support different corps units on a mission basis.

* Aviation group forms aviation task forces from different units within the group, to include assault, attack, medium lift, and scout helicopters.

o Advantages

* This centralization permits valuable flexibility in massing or dispersing aviation units, and it further supports a requirement for surging on a specific mission.

* The aviation group can insure intensive aviation training and cross-training among its organic units.

o Disadvantages

* The centralization of aviation units within a larger aviation unit tends to insulate those units from combined arms training and exposure. The proficiency gained from habitual association with external units and the repetition of combined arms training suffers. This disadvantage can be overcome, however, by the aggressive aviation commander who appreciates the necessity of continuous, repetitive training with ground units; nontheless, this situation is a comparative disadvantage.

* Combined arms training situations, options, and innovations are inhibited because of the learning curve that must be met each time an air assault or even airmobile task force is formed.

* The reaction time in dispatching corps-level assets to

divisional use, with the probable requirement for subsequent further assignment, may prove unwieldy and unacceptably slow on the battlefield of the 1990s.

* The aviation group concept does not recognize the AirLand Battle 2000 trend to self-contained, integrated close combat forces.

— Separate CABs in mechanized infantry and armor divisions (the heavy divisions).

o Features

* The single CSAC provides a valuable logistics transport to conduct rapid resupply over extended distances.

* The CSAC offers a limited troop movement capability as it can move a dismounted infantry company in a single lift.[3]

* The aviation unit is subordinate to and integrated with ground maneuver units, when compared to separate aviation group alternative.

o Advantages

* The lift capabilities of the CSAC offer the commander a certain logistical flexibility in his planning.

* The helicopter is immediately responsive to emergency resupply requirements and is not terrain dependent.

* The presence of the CSAC in the heavy divisions represents an air assault or airmobile potential that the opposing commander must consider as an ever present possibility.

o Disadvantages

* Air assault or even airmobile training suffers as the combat elements of the heavy divisions are equipment-oriented, and their training requirements are tied to those equipments.

* The potential of the assault aircraft, that very potential worrying the opposing commander, may not be realized as the helicopters are few in number and are usually husbanded for use as tactical resupply vehicles.

— Separate CABs in light infantry divisions

o Features

* The two CSACs of the CAB provide an available air assault or airmobile training base. The two CSACs can carry two companies of combat-equipped infantrymen. With the addition of the VH60 in its seats-out configuration, two CSACs can carry the fighting elements of an infantry battalion.

* The CAB is subordinate to the ground division and integrated with ground maneuver units.

* The CAB contains the only tactical transport or assault capability in the infantry divisions; soft-skinned trucks have become essentially an administrative transport.

o Advantages

* This configuration, an aviation battalion within an infantry division, is a long-standing relationship with all the advantages of systematically evolved doctrine and stable structure.

* The presence of this responsive asset within the division promotes combined arms team and task force training for all the infantry battalions. The CAB can mass its assets and conduct battalion-level air assault or airmobile operations, or it can parcel out the CSACs for company team, battalion-supervised operations.

* The CAB potential provides a readily available mobility multiplier for a unit with otherwise restricted tactical mobility.

o Disadvantages

* The subordination of a single CAB within an infantry division may inhibit, or even deny, necessary aviation-peculiar skills training. Aviators require some specialized training, both new and refresher, that cannot be done effectively as a part of tactical exercises.

* The demands may overextend the assets. There is a fine line between proper allocation of resources and dissipation to ineffectiveness. The temptation and practice of sharing limited resources equally to all claimants can have a disastrous effect on air assault training and a deleterious impact on airmobile training. Additionally, the structured and time-phased maintenance requirements are further aggrevated by overextended commitments of resources.

* The separateness of the CAB is not consistent with the long range expectations of AirLand Battle 2000 and its emphasis on integrated, self-contained close combat forces.

-- CABs in the aviation group of the air assault division

o Features

* The two CABs of the aviation group each contain three CSACs; thus, with the UH60 in its seats-out configuration, each CAB can carry approximately six companies of combat-equipped infantrymen in a single lift, or the majority of the combat elements of two battalions. With the UH60 in its seats-in configuration, the conventional one CSAC to one company pertains.

* The aviation assets, the two CABs and the medium lift helicopter (MLH) battalion, are the sole means of transportation organic to the division.

* The air assault division has over 400 helicopters organic

to its various units. This high concentration of aircraft is not exceeded by any tactical unit in the Army's force structure.

* The air assault division is a specialized unit for air assault operations. The focus of training is on both innovation and repetition in air assault operations, to include the execution of traditional missions, such as the delay and the defense, in the air assault mode.

* Predictably, the concentration of high-dollar items such as the helicopter and the necessary commissioned and warrant officer crews make the air assault division one of the most expensive in the Army.

o Advantages

* The air assault division provides a highly trained force in a specialized area of tactical employment. The air assault division maintains a certain level of proficiency and expertise in an immediately responsive posture for no-notice strategic deployment and subsequent tactical employment.

* This comprehensive integration of considerable assets and troops available promotes the closest working relationships among the components of the air assault task force. The dividends in standardization and interchangeability of task force components are evident. In the existing air assault division, this interchangeability is a necessity as there are only two CABs for three brigades.

* As the learning curve for standard operations is compressed, innovation and experimentation by the air assault units increase. As expected, the air assault division enjoys unofficial proponency for the development, documentation, and dissemination of tactical practices and techniques involving air assault forces.

o Disadvantages

* The concentration of limited aviation assets in a single unit denies measurable air assault and airmobile training to units throughout the Army. The two CABs and single AHB represent the assets found in three light infantry divisions. A redistribution of assets could materially enhance the training proficiency of other divisions and separate brigades.

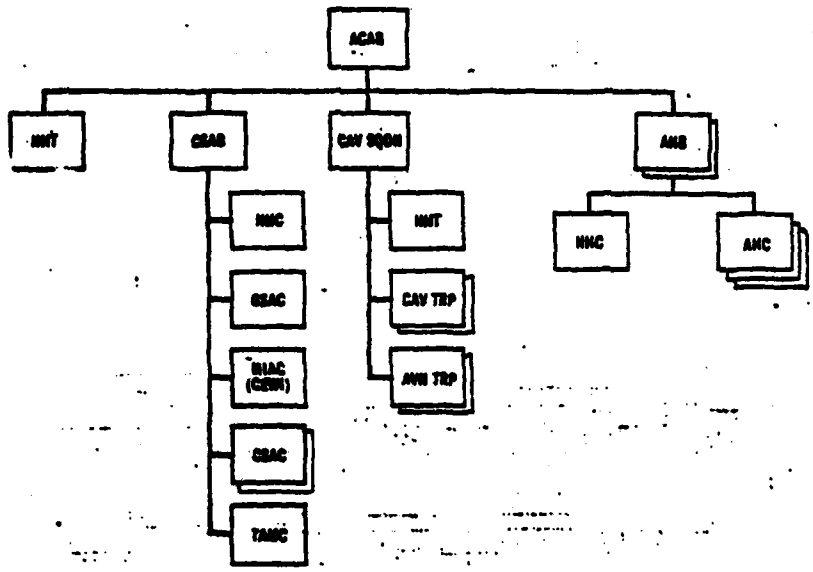
* The air assault division is weather dependent, without the external augmentation of ground transport. When the aircraft are grounded, the air assault division goes instantly from the most mobile, responsive division in the Army to the least: from most flexible to least flexible.

ALTERNATIVE #2 — IMPLEMENT DIVISION 86 ADJUSTMENTS

This alternative recognized the planned transition from the H-series TOE to the Division 86 adjustments. With the exception of the air assault division, these adjustments include the internal reorganization of the air cavalry troops and the air cavalry squadron, the internal reorganization of attack helicopter companies (AHC) and battalions, and the creation of a brigade-level aviation headquarters, the Air Cavalry Attack Brigade (ACAB), that consolidates essentially all the division's tactical aviation under a single command.

— Features

o Both heavy and light divisions would have similarly organized ACABs with the following composition:[4]



* One HHC for command and control

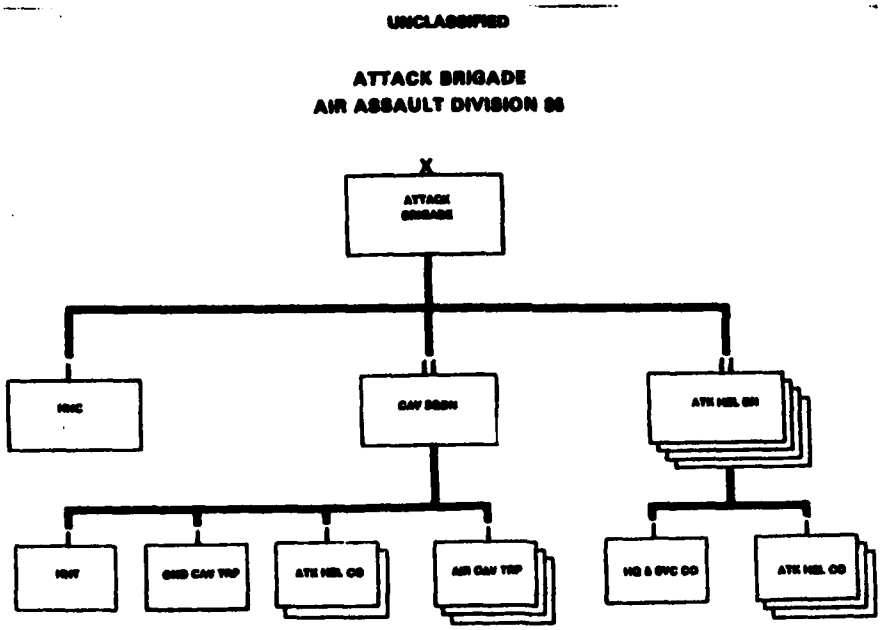
* One Combat Support Aviation Battalion (CSAB) that includes the Military Intelligence Aircraft Company (MIAC) as well as those units formerly found in the CAB (except the AHC); similar to the ARCSA III CABs, the heavy divisions have a single CSAC, whereas the light divisions have two CSACs.

* One cavalry squadron with two ground troops and two air troops; the new air troop is smaller in composition than the current version.

* Two AHBs, each consisting of three AHCs (each company approximately equal to the platoons of the H-series TOE).

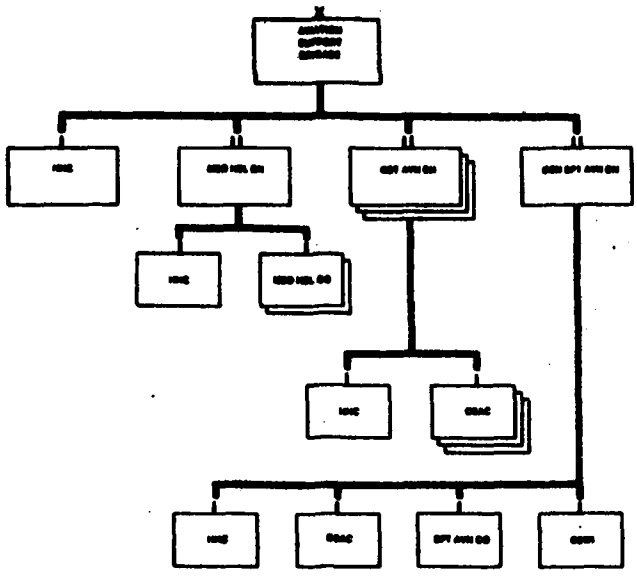
This ACAB features more units, but of smaller size than the preceding like organization. This redistribution of assets results in additional manpower requirements for command and staff in the newly formed, smaller units.

o The air assault division picks up an Attack Brigade and an Aviation Support Brigade in place of the Aviation Group found in the H-series. Essentially, the division's aviation assets are functionally aligned with the maneuver assets, the air cavalry and attack helicopters, in the Attack Brigade, and the support helicopters found in the Aviation Support Brigade. Nonetheless, the TAM battalion and the Air Ambulance Medical Company remain in DISCOM.[5]



UNCLASSIFIED

AVIATION SUPPORT BRIGADE
AIR ASSAULT DIVISION 86



* The Attack Brigade features four attack helicopter battalions of three companies each, and a heavy cavalry squadron of three air cavalry troops, two attack helicopter companies, and one ground troop.

* The Aviation Support Brigade includes three CABs, not CSABs as in cases of the other divisions, of three CSACs each; one general support aviation battalion (GSAB), and one medium helicopter battalion of two companies each.

* Similar to the ACABs, the AHBs are restructured from the H-series such that the AHB is roughly equivalent to the earlier (H-series) AHC.

— Advantages[6]

o The functional grouping of the aviation units promotes a degree of shared expertise by the proximate association. The air cavalry and attack units employ like aircraft, and occasionally assume elements of one another's missions. Notwithstanding their different command rela-

tionships upon tactical employment, their units will profit from a common training experience under a single controlling headquarters.

o Aviation policies and procedures will tend to be more standardized with a single aviation commander, the ACAB commander in the light and heavy divisions. The air assault division will feature two brigade-level aviation commanders which will place the burden of standardization at the general officer level.

o With the decision to provide a type aviation unit, the relatively standard ACAB for both heavy and light divisions, another step in Army-wide standardization is achieved. Leaders can become familiar with the composition and capabilities of the ACAB and can confidently apply this knowledge in succeeding assignments, particularly in the area of air assault or airmobile operations.

o The addition of a fourth attack helicopter unit and a third CAB to the air assault division contributes to the enhanced combat effectiveness achieved from habitual association. With four AHBs, the assets can be dispersed with one AHB associated with each brigade and one AHB retained under division control. Similarly, with three CABs, each brigade can routinely train with the same CAB. Significantly, the CABs were not reduced in the number of assigned aircraft.

— Disadvantages

o The brigade-level headquarters may be an unnecessary layering for coordination and execution. The ACAB commander and staff are now involved in the handling of the aviation assets with the potential for delays and distortion in both coordination and employment.

o With large aviation units consisting of both maneuver and support assets, the aviation units may tend to train with aviation as an end in itself. With the creation of a brigade-level headquarters, there

will be the inevitable tendency to define its role in terms of discernable accomplishments, such as improved aviation training. The balance between aviation-peculiar training and the combined arms training involving aviation, troops, and other assets is difficult to achieve.

o Air assault teamwork may suffer. This disadvantage is a corollary of the preceding issue, but it can be overcome by aggressive commanders who recognize the need for combined training regardless of the command separations.

o The ACAB further isolates the CSACs by subordinating them one more layer from the ground units.

o The air assault division will feature two brigade level commanders, each focused in a functional area that may place each within the supervisory purview of a different assistant division commander (ADC). The direct responsibility for aviation standardization may end up at the commanding general's level.

o The Division 86 adjustments do not appear to recognize the trends of AirLand Battle 2000. The ACAB with its focus on functional grouping is seemingly antithetical to the close combat force idea of AirLand Battle 2000. The two concepts, Division 86 and AirLand Battle 2000, are not incompatible, but the structural shifts of Division 86 appear to move oblique to the thrusts of AirLand Battle 2000 with its stated emphasis on self-contained forces that include the combat, combat support, and combat service support elements as organic or attached components. If the evolving structures of AirLand Battle 2000 become reality, then Division 86 with its ACABs may be an unnecessary detour.

ALTERNATIVE #3 -- FORM SEPARATE AIR ASSAULT BRIGADES

This alternative provides for a redistribution of helicopter assets and a realignment of command relationships. This option spreads helicopter assets more equitably and subordinates them to a tactical headquarters to promote combined arms training. The option produces a standing air assault capability within existing division force structures.

-- Features

o The air assault division and the separate aviation groups would be eliminated as such, with their CABs and CSACs redistributed to the other divisions to enhance their airmobility or air assault training base. The existing air assault division would revert to a light infantry division and retain the standard CAB of two CSAC and one AHB. The other assets would augment the remainder of the force with the priority to the light infantry divisions, with the mechanized infantry divisions being a distant second. As the UH60 enters the inventory in greater numbers, the addition of a single CSAC will be a significant increase in a unit's air assault or airmobile capability.

o With the redistribution of the organic assets of the CABs, the newly augmented divisional CABs would be attached or, as a minimum, be placed OPCON to an existing brigade headquarters to form a nucleus for air assault training. Thus, each division would have an air assault brigade as a part of the division structure, and this brigade would train to the level of expertise in air assault operations.[7] The air assault brigade would have the following composition:

* HHC, with aviation platoon
* 3X light infantry (air assault) battalions

* 1X CAB (attached or OPCON)

* Specifically identified combat support and combat service support units that would habitually train with the air assault brigade to gain expertise in the special support practices and techniques of air assault operations.

The air assault brigades would be subordinate to the division, but would be relatively self-contained when compared to the other two type brigades in the division.

o Those existing separate light infantry brigades might be sufficiently augmented by additional CSACs to become an air assault brigade, comparable to the divisional brigades but possessing the advantage of already having the attachment of combat support and combat service support units.

o The packaging of the light infantry brigade and the CAB would be the discrete air assault brigade of the light infantry divisions. This brigade would be designated as the air assault brigade on a one time basis and not subject to redesignation at the whim of subsequent commanders. It would become a TOE or MTOE designation.

o This option does not invalidate the Division 86 initiatives, but does remove the CSACs from the CSAB of the ACAB; additionally, a battalion command and staff structure would have to be superimposed on the two CSACs, thus forming a light CAB as a part of the discrete air assault brigade. An alternative would be moving the CSAB headquarters with the CSACs and accepting the remaining aviation companies as separate companies within the ACAB.

-- Advantages

o The designation of air assault brigades with a nucleus of a CAB and three infantry battalions in each of the light infantry divisions

would insure a greater proficiency in air assault operations throughout the force. The number of air assault brigades would increase from three to eight[8], and the skill levels attained by these brigades would add true air assault flexibility in both the forward-deployed forces and the strategic reserve.

o The divisions containing the discrete air assault brigade would similarly have a local flexibility gained through the air assault expertise found in a significant part of the command. Inherent in the air assault operation is the ability to execute the full range of light infantry operations once dismounted, thus the commander gains a capability that he did not have previously without sacrificing his fundamental infantry operations proficiency.

o The command and control mechanisms for the designated units would be streamlined by the formation of an air assault brigade. The need for coordination through parent headquarters, with the accompanying delays and potential for confusion, is eliminated, and the member units and their commanders know each other with the accretive effects of habitual association.

o The air assault brigade also becomes an identified, self-contained deployment package. The special skills and capabilities of the air assault brigade present a second option to both the strategic level planners and the local commander. The habitual association among the units of the air assault brigade, to include some CS and CSS units routinely placed in support, would tend to establish a cohesion and readiness not usually associated with brigade task forces that are formed on a mission bases.

o This alternative best anticipates the evolution into the close

combat forces idea of the AirLand Battle 2000. By linking the ground unit and the mobility unit, the nucleus of the self-contained close combat force is forged. The idea of standing, discrete air assault brigades, capable of becoming complete task forces with the formal attachment of their habitually associated units, may be the prototype for future close combat forces involving the helicopter as the mobility asset.

-- Disadvantages

o Notwithstanding that this alternative is a zero sum exercise with regard to force structure, it may require considerable adjustments in physical locations and training plans. Some CSACs may have to be transferred to different posts, and some aviations units may have to be relocated on their original posts. Training plans would have to accommodate the special requirements of air assault forces, clearly at the expense of a more standardized program that might govern the activities of three like brigades.

o The designated air assault brigade within the division would require increased staffing at the brigade-level, with particular requirements in the S3 and S4 sections. These augmentees might well come from the CAB staff as its coordination demands would lessen if attached or placed OPCON to a brigade-level headquarters. However, there would be a disruption of the SOPs and stability that have evolved during the period the CABs had the status and responsibilities of a separate battalion.

o Intensive aviation training may well be compromised if the CAB is subordinated to an infantry headquarters. The opportunity for the CAB to hone its aviation-unique skills may well be diminished by the demands of the maneuver units of the brigade. This disadvantage might

disappear with education, but the potential for problems marks this consideration as a significant detractor.

o The subordination of the CAB to a brigade may lead to AVIM problems. By adding a link to the chain of maintenance, the TAM Company may find comparative delays in its AVIM work.

ALTERNATIVE #4 — ELIMINATE AIR ASSAULT UNITS PER SE

This alternative accepts the contention that an air assault capability does not necessarily require a standing air assault force. The current demands for habitual association and repetitive training stem from the fact that mutual education and experience are needed to achieve joint expertise. Additionally, the air assault or airmobile task force commander is doctrinally found to be the ground commander; he bears the ultimate burden of command, control, and coordination; the aviation commander, though titled the Air Mission Commander, is more often the advisor to the task force commander on aviation employment. Both commanders require extensive training to execute their duties; this requirement is crucial in the argument for air assault forces. This option shifts the burden of expertise to gain the capabilities without special force packaging.

— Features

o An air assault capability, indeed a standing capability, may be achieved by placing the burden of expertise on the aviation units and aviators of the CAB (in the H-series) and the ACAB (in Division 86). This feature may indeed be a conditional one, but it does raise a credible alternative and complement to the preceding options. The CAB (H-series) or CSAB (Division 86) commander would be charged with com-

manding all aviation components of the air assault task force, to include OPCON of the air cavalry, attack, and assault assets. Each of these components would know their roles for the particular operation, but the commander of the aviation task force would be the expert in all aviation-related aspects of the operation, to include the integration and employment of the Joint Air Attack Team (JAAT), the Suppression of Enemy Air Defense (SEAD), and those elements needed to conduct any aviation part of an air assault operation. The ground commander would be principally charged with the planning and execution requirements of the Ground Tactical Plan, thus freeing him from the duties of the coordinating aspects of the air movement from the PZ to the LZ. A crude, but graphic, analogy might be found with the Navy and Marines and their division of responsibilities during the conduct of an amphibious assault. This feature envisions air assault packages within the aviation unit, either CAB or ACAB, that are experienced, knowledgeable, and practiced in all types and facets of air assault operations. To achieve this level of expertise in aviators and aviation units requires a career pattern of training that may be realized only through branching.[9] The degree that this expertise is found in the aviation elements impacts directly on the training lag time needed to move from airmobile to air assault. If the expertise becomes fully developed in the aviation structure, then the air assault capability is in being.

o This option eliminates air assault units as standing forces. Given the current force structure, this alternative would eliminate and/or convert the Army's single air assault division, thus freeing the excess organic CABs and other aviation units for redistribution with the appropriate changes in command and support relationships.

o The resulting configurations would provide CSAC-heavy CABs in

light infantry divisions and AHC-heavy CABs in the mechanized infantry and armor divisions. With the exception of the redistributed CAB assets freed-up by the elimination of the air assault division, there is little organizational change in the force structure. These CABs would continue to provide the basis for airmobile, or air assault training, and logistics support for their respective units.

o Units with CABs would form airmobile or air assault task forces on an ad-hoc, as needed basis. The task force would be formed, and trained up if necessary for particularly complex operations, as the training or tactical situation might warrant. The CAB presence as a part of the division structure provides both a source for air assault expertise and task force training on a regular basis as a part of a light infantry unit's training program. The efficiency and currency of a ground unit's airmobile or air assault training, if a factor in the operation, would dictate the degree of refresher training and rehearsal needed after the formation of a task force. The complexity of the mission, defined in terms of risks anticipated and skills needed, would be the second, equally important variable. However, the standing expertise of the aviators would greatly diminish the time required for coordination, joint training, and staging activities.

— Advantages

o The dissolution of standing air assault units provides a further measure of standardization within the force structure. The composition and structure of the Army's light infantry divisions would move one more unit closer to standardization, thus further simplifying the logistics and support programs that heretofore have had to grapple with yet another unique division.

o Aviation assets are expensive and limited. With the release of the aviation assets previously restricted to a single division, the other Army forces have increased access and exposure to these limited resources. Depending upon the specific actions taken with the aviation units, be they reassigned as units or individual aircraft, the resultant impact will make more airmobile and air assault training available to more units. A clear option is to release the CABs or their assets to the reserve components.

o There should be monetary savings. With the reassignment of some aviation units from the air assault division, there will be a perceivable reduction in the aviation logistics overload necessitated by the heavy concentration of aviation units in a single division. Many of the aviation logistics personnel would be absorbed into the TAM companies needed to flesh out the CABs to provide organic AVIM support, but there would be savings in personnel at the headquarters elements that had been required to handle the aviation-peculiar demands of an air assault division.

— Disadvantages

o The single, overriding disadvantage that subsumes all others is the time required to train a generation of aviator commanders at all levels to the standard of expertise needed. The complexity of many air assault operations demands special skills on the part of aviator and infantryman alike, particularly in the areas of command, control, communications, and fire support. To integrate and control the combined arms team of assault helicopter, infantryman, air cavalry, attack helicopters, close air support, and field artillery demand skills not routinely developed by infantry or aviation commanders. To be sure, all can train to the standard required, but the dimension of time is

critical. If a specially trained air assault force is needed in the near term from the strategic reserve on short notice, it must train quickly and efficiently, either prior to or immediately after deployment. If deployed already and in the combat theater, a unit will need training time to reach a minimum level of proficiency sufficient to warrant the risk-taking associated with bold, potentially lucrative air assault operations. Air assault logistic skills would have to be developed concurrently with the tactical train-up. The time will not be available on the battlefield of 1990s; and if the operation is undertaken in the absence of sufficient training, the possibility and eventuality of catastrophic losses may preclude further air assault employment.

o This alternative would work for the battlefield of the 1990s, but it requires an immediate decision to shift the burden of expertise, a decision that seems inextricably linked to branching.

o If the decision were made to develop the expertise in the aviation community, the interim demands for an air assault capability between the decision time and the capability time would require an interim solution. An evolutionary plan could become the victim of well-intentioned tinkering over the interim period and the intended solution could thus be side-tracked.

o This focus on capability rather than structure may not be consistent with the AirLand Battle 2000 concept. The close combat forces are to have capabilities based on standing structures, whereas this alternative envisions capabilities realized through task organizing on an ad-hoc, mission basis with units that are expert in their respective portion of the air assault operation.

CONCLUSIONS

There is an air assault differential that sets it apart from the less complex airmobile operation. The air assault operation more fully realizes the extraordinary potential of the helicopter in delivering troops, equipment, and fire power throughout the width and depth of the AirLand battlefield. Air assault significantly expands the capabilities of the commander and fulfills the maneuver precepts of the AirLand Battle operational concept.

The components of the air assault task force and the air assault capability are found in every active division. Though the presence of only a single CSAC in the heavy division suggests only a minimal, if any, potential for significant air assault operations in those units. However, the presence of the component parts does not equate to an air assault capability. The air assault division, predictably, maintains the air assault capability through routine operation and habitual association among all components of the air assault task force. The other light divisions have not achieved an air assault capability, but rather retain a more modest ability to conduct airmobile operations. The challenge is to raise the present capability of these divisions to realize their air assault potential.

The Status Quo and Division 86 are not dissimilar in the sense that neither structure takes any measure to merge more closely the aviation units with the ground units. The ACAB is a structural refinement that furthers the efficacy of aviation operations, but not necessarily air assault operations.

The formation of discrete air assault brigades within the light infantry divisions would provide a close working relationship among the

principals at the nucleus of the air assault task force. Thus, each light infantry division, both in the near term and long term, would have a brigade capable of air assault operations from platoon through battalion level, trained to a standard for immediate employment. Notwithstanding the presence of a significant number of helicopters in the CAB (and later Division 86 ACAB) of the heavy division, the formation of an air assault unit, perhaps even only of battalion size, would unnecessarily detract from the intensive training required to conduct mechanized task force and team operations. Airmobile operations would be the standard for the heavy divisions.

Ironically, the elimination of air assault units per se may be the eventual step in achieving a more widespread air assault capability. The key feature to this option is the transfer of the burden for air assault expertise and skill from the ground commander, the traditional air assault task force commander, to the aviation commander, the traditional air mission commander. Briefly, the air mission commander, the senior aviation commander on the operation, would be the expert in all air movement facets of the air assault operation; thus, the ground commander could focus on the all important ground tactical plan and those points where the aviation and ground elements meet: the loading plan, the landing plan, and in-flight contingencies. The result would be that each division would have an air assault aviation package, consisting of the CSACs, the air cavalry team, and the attack helicopter team, that could rendesvous with the selected ground unit and conduct the air movement phase of a particular air assault operation. Such an expertise by Army aviators would come only through education, experience, and training. The expertise required throughout the aviation

community makes this an option of 1990s and only achievable through a near term decision for branching Army aviation.

The air assault division remains a vital component of the Army force structure. Into the 1990s, the air assault division provides a true air assault capability at a division level and, if necessary, can immediately provide up to three air assault brigades for independent and semi-independent operations. Additionally, the division serves as a test bed for the evaluation of evolving air assault concepts and ideas.

CHAPTER II

ENDNOTES

1. The VHI and VH60 series helicopters are found throughout the force structure in both its utility and assault roles. This study examines the utility helicopter in its assault roles, and disregards, for the most part, the use of the utility helicopter in its liaison, command and control, and medevac, to mention but three utility uses.

2. Each CSAC has an Aviation Unit Maintenance (AVUM) Platoon, but is requires the Aviation Intermediate Maintenance (AVIM) support found in the Transportation Aviation Maintenance (TAM) Company of the battalion, or the AVIM support of the TAM battalion if the CSAC is a part of an air assault division.

3. US Department of the Army, US Army Armor School, US Army Armor Reference Data, Vol. I, The Army Division, Fort Knox: 1981, p. 50. This general statement is made for a 20XUH1H CSAC or a 15X VH60 CSAC, the latter configured with seats and an ACL of 11 combat-equipped soldiers. As mentioned earlier, the UH60, stripped of seats, can carry 20 fully equipped soldiers; thus a single UH60 CSAC can carry two companies of dismounted infantryman.

4. The ACAB of the heavy division is discussed in a variety of publications and concept papers, but perhaps most succinctly in US Department of the Army, US Army Armor Center, Operational and Organizational Concept: Air Cavalry Attack Brigade, Fort Knox: November 1980, pp.1-1 thru 1-11. The ACAB of the light division is discussed in equal clarity in US Department of the Army, Infantry Division 86: Feeder Report Draft, undated, pp. 2-12 thru 2-20; the following sketch is extracted from this feeder report at p. 2-20.

5. US Department of the Army, US Army Aviation Center and Fort Rucker, "Section III: Air Assault Division; Chapter II: Organizations," Army Aviation Mission Area Analysis, Fort Rucker: undated, pp. 11-67; the following sketches are extracted from this document at pp. 11-65, 11-66.

6. The below-listed Advantages and Disadvantages are based on analysis with regard to options that enhance or detract from air assault or airmobile operations. The complete Division 86 study and process undoubtedly include exhaustive lists of advantages and disadvantages across a wide spectrum of considerations. The scope of this study

restricts the focus to the air assault alternatives.

7. This concept of an especially trained brigade within a standard division finds numerous historical antecedents: in the airborne brigade of the 8th Infantry Division (Mech), and in the airborne brigade of the 11th Air Assault Division (Test) and the follow-on 1st Cavalry Division (Airmobile). Additionally, the TRICAP tests examined a division-size force with discrete capabilities within its brigade forces. More recently, the 2d Infantry Division during the 1976-78 timeframe (MG Morris Brady, Commander) dedicated its assault helicopter assets to a single brigade so that this designated brigade would be the air assault capable unit.

8. The three current are those found in the 101st Airborne Division (AASLT) with the fine additional air assault brigades to come from the following light infantry divisions: 2d Infantry, 7th Infantry, 9th Infantry (notwithstanding that ACAB conversion is in progress), 25th Infantry, and the 82nd Airborne. If the air assault division is eliminated, then the three replacement air assault brigades would be found in the new 101st Infantry Division, and in the 172d Infantry Brigade (SEP) and 193d Infantry Brigade (SEP) which would gain CSACs from the released units of the disbanded air assault division.

9. The concept of branching for aviators may find its most effective support in the operational requirements that have grown increasingly complex and sophisticated with the advent of air assault, air cavalry, and attack helicopter operations and tactics. The administrative, logistical, and tactical demands on the leadership in an aviation unit must be observed and learned at each level. Aviators must be as tactically competent in aviation as infantrymen are in ground combat.

CHAPTER III

STRATEGIC DEPLOYMENT CONSIDERATIONS

INTRODUCTION

Currently, a rough nuclear parity exists between the Soviet Union and the United States. This condition tends to force actions in the direction of limited war rather than toward a confrontation that would ultimately lead to general war. US strategic policy places increased emphasis on the rapid and flexible strategic mobility of its military forces. In terms of potential deterrent effect, deployability assets provide a force multiplier to the military force being considered for use. The United States' concept of a flexible response hangs on the ability to deploy rapidly and to sustain general purpose forces throughout the world. Another equally important factor contributing to the need for rapid deployment is that the United States will likely continue its policy of self-imposed military manpower reduction from overseas bases into the next decade. If the US is to maintain credibility with its strategic policy of deterrence, it must have available the ability to deploy a highly mobile, well balanced conventional force from continental bases within the United States.[1]

> Effective deterrence depends on our own national will and capability to employ military force to defend the nation's interest as well as our potential adversary's perception of our commitment and ability to project military power throughout the world.[2]

Thus, two essential principles evolve: The rapid deployment of flexible, responsive Army forces is the essential ingredient in projecting combat power, and the deployment power projection capability constitutes a vital complement to forward basing. Air assault forces are designed so that they can be tailored to respond rapidly throughout the world and fulfill the requirement for "flexible, responsive Army forces." As others, these versatile, light forces depend on deployability modes to convey a message of commitment by their actual or potential deployment to any nation or region. The focus of this chapter is threefold:

— To examine the suitability of air assault forces within the context of strategic power projection and possible contingency theaters.

— To analyze the strategic deployment considerations for air assault forces in terms of strategic lift assets required, and

— To establish a priority for deployment contingencies that best balances advantages accrued by the deploying force with the costs in strategic lift.

POWER PROJECTION AND AIR ASSAULT FORCES

From the end of World War II through the decade of the 70s, US military forces were employed approximately 200 times in the interest of our national political goals. In addition, a like number of military deployments occurred to satisfy humanitarian responses in worldwide disaster relief operations.[3]

Projection of national power, as stated before, will continue as a US objective into the 1990s. However, a reduction of forward deployed

military forces will tend to increase as domestic economic pressures and host nation defense policies change. Given these assumptions, the rapid deployment of well-trained and equipped air assault forces to a world trouble spot will show determination and resolve in maintaining US interests. Air assault forces are well suited to accomplish the most demanding challenge facing the Army in the 90s, a challenge which may well include getting there firstest with the leastest in the expectation of achieving deterrence through presence and commitment.[4] Another component of this requirement is for the Army to develop forces capable of responding to multiple threats throughout the world without compromising vital interest in other parts of the world. The challenge is further underscored by the requirement that the deployed force may finally have to defend itself to accomplish its mission, or to temporize in the absence of any clearly defined alternative -- either or both through the conduct of combat operations. Thus, the swift arrival of forces into a contingency area is important in itself, but the US policy of risk aversion must also address whether we have the capability to project combat power in sufficient strength to accomplish the mission. Power projection must not be entered into lightly. The deployed force must be credibly strong enough in the eyes of the adversary to deter an ultimate confrontation, or if necessary, to accept conflict without catastrophic results.[5] Air assault forces, deployed from outside the contingency theater, may well be the optimum force to handle the multiple demands of power projection.

There is a wide spectrum of contingencies that challenges the concept of power projection. It is instructive to renew the three common situations that dominate the 1980s and that will likely be characteristic of the 1990s.

— Mid-high intensity, NATO commitment. Still considered the most dangerous contingency in terms of national survival, the NATO challenge is the most demanding for air assault forces; but it is the most challenging for all the forces, not just air assault forces — a fact that is frequently overlooked. There is indeed maximum emphasis on staying power, sustainability, and the employment of all weapons systems. The threat features state-of-the-art weapons employed by regular forces. Host nation support is available and the battlefield contains a well-developed transportation infrastructure that permits relatively easy ground mobility for all types of vehicles. The air and sea LOCs are extremely vulnerable to sporadic, if not sustained, interdiction.

— Mid-intensity, developing or developed world. This contingency type includes Korea, where troops are already forward deployed, and Southwest Asia. The level of conflict can be raised to high intensity, but conventional planning usually dominates tactical and operational considerations. As the assumptions and eventualities are less clearly definable, the premium is on deployment forces that are flexible, mobile, and sustainable. The transportation infrastructure is comparatively incomplete, and ground mobility is somewhat inhibited by this lack of infrastructure and the difficult terrain. Threat forces are composed of regular units, augmented by irregular or paramilitary forces of differing abilities and potential. This battlefield may have the same types of modern weaponry as found on the NATO central battlefield, but the density across the board is discernibly less.

— Low-intensity, Third World. Perhaps the least threatening to national survival, these contingencies are no less real and demanding on the forces that deploy. Current and potential problem areas include

Central America, where US forces are already forward deployed, and Africa south of the Sahara, where much of the nation's vital minerals are obtained. The threat features weaponry across the lethality band, but a comparatively smaller number of sophisticated systems. The transportation infrastructure is poorly developed, placing a great burden on deployed forces to negotiate the terrain and distances in these areas. Clearly, the deploying force must contain a capability for tactical mobility once deployed. The Vietnam experience has verified the immense value of airmobile and air assault forces in such contingencies.

There are variations and combinations of these contingencies, but they are the basic framework for contingency area consideration. Deploying forces may indeed be reinforcing forces rather than the initial lodgement elements. In the purest sense, power projection involves the non-NATO contingencies because the US forces present in NATO are certainly a testimony to US commitment and resolve.

Air assault forces can respond to the demands of any of these contingencies. Those challenges that require flexibility, mobility, and firepower regardless of terrain would seem to be most suitably answered by air assault forces. With the obvious premium on rapidity of deployment, then the planner must balance the capability of the force deployed against the demands placed on the limited strategic lift assets. Clearly, the quickest force to deploy is that of light infantry, air-landing or parachuting into the contingency area; however, that may indeed be the "firstest," but may not have enough of the "leastest." The other extreme is the heavy force complete with logistical support arriving by sea and air; however, the force may not be "firstest" with the obvious implications. Certainly, employment in the contingency area

is a vital aspect of power projection, and those employment options will be examined in the following chapter. But the essential question of power projection remains: What is the maximum effect that can be obtained for the least expenditure of limited deployment forces and strategic lift?

The projectability of air assault forces provides a degree of responsiveness, visibility, and flexibility to the Army in the accomplishment of its missions that cannot be equaled by any other unit in the force structure. Deployment of air assault forces serves to convey a political message by a widely visible display of military presence. This show of force mission is dramatically enhanced by the terrain-independent mobility of air assault forces. The UH-60 enjoys a 300-mile radius of action that permits the simultaneous display of US assets across a demonstrably broad area at any one time. The employment options of air assault forces are numerous and a function of the ubiquitous METT factors, but the essential ingredients here are their suitability and adaptability for strategic deployability.

Air assault forces can easily be configured for strategic deployability. Helicopters have engineered into their design easily removable or folding components that facilitate loading within USAF aircraft and USN ships. These features greatly enhance transportability of these aircraft. The mainstay of the air assault lift assets during the 1990s will be the UH-60 and its improved versions. UH-60s are air transportable in MAC C-130, C-141B, and C-5A cargo type aircraft. A C-130 will carry one UH-60; the C-141B can handle two UH-60s, and six to eight UH-60s can be transported in the C-5A.[6]

Preparing the UH-60 for airloading entails folding the main and tail roter blades, removing the mast extender, and folding the after

section of the empannage. This preparation requires two man-hours, and an additional .5 hours are needed for actual loading of the helicopter onto the MAC aircraft. At destination, preparation for flight is a simple reversal of the procedure and requires two hours to complete. Off-loading is accomplished in 30 minutes. Other helicopters remaining in the Army's inventory into the 1990s do not possess the comparable ease of preparation for air transportability or the ease of reassembly for flight, but they do retain the capability. For example, the CH-47 requires a prep time for air loading of 222 man-hours and a reassembly time of 456 man-hours; thus, utilizing a six-man maintenance crew at both loading and unloading sites will consume elapsed times of 37 and 76 hours respectively.[7] (For detail airlift preparation times, see Figure 1.)

HELICOPTER PREPARATION TIMES

HELICOPTER	MAN-HOURS DISASSEMBLY	MEN	ELAPSED TIME
CH-47 Chinook	222.0	6	37.0
AH-1 Cobra	6.0	3	2.0
UH-1 Huey	5.0	3	2.0
OH-58 Kiowa	4.0	3	1.5
UH-60 Blackhawk	2.0	6	.5
AH-64 AAA	24.5	6	4.0
	REASSEMBLY		
CH-47 Chinook	456.0 (30)	6	76.0 (5)
AH-1 Cobra	10.5 (4.5)	3	3.5 (1.5)
UH-1 Huey	9.5 (4.5)	3	3.5 (1.5)
OH-58 Kiowa	8.5 (4.5)	3	3.5 (1.5)
UH-60 Blackhawk	2.0	6	.5
AH-64 AAA	24.0	6	4.0

1. Times approved for MTMC use by the Director of Army Aviation, Office of the Assistant Chief of Staff for Force Development, Department of the Army, in their 1st Indorsement, DAFD-AVO 10 Dec 73, to MTMTS-PL Letter, dated 30 Nov 73, Subject: Assembly and Reassembly Times for Army

Aircraft.

2. Numbers in parentheses reflect times for maintenance operational checks and functional test flights, which are included in total man-hours and elapsed times.

3. Preservation performed concurrently.

4. Approximately one extra day required for installation and check of weapons systems.

FIGURE 1

STRATEGIC AIRLIFT

The deployment of air assault forces may occur when time is critical. If so, the best method is MAC strategic airlift assets. Projected demands of increased lift requirements have resulted in efforts to upgrade MAC airlift capabilities. Programs to improve cargo capabilities include the C-141 stretch modifications which should be accomplished by summer of 1982. The C-5 wing modification should be completed by 1987. Acquisition of spare parts to support higher C-5 and C-141 wartime utilization rates, acquisition of additional KC-10s, and procurement of additional outsize cargo aircraft constitute significant advances in strategic deployability. The congressionally mandated Mobility Study has documented that intertheater airlift capability should be increased by 20 million ton-miles per day to provide an adequate capability for force projection. Sufficient projected passenger lift is realized by incorporating the Civil Reserve Air Fleet for most planned major deployments. However, cargo airlift, especially for outsize equipment such as attack and light helicopters, is less than adequate to meet extensive early deployment and sustainability requirements.[8]

The effective use of airlift to deploy air assault forces requires

adequate aerial port manpower and material handling capabilities. Current funding will increase manpower and material handling equipment to balance aircraft and aerial port capability by FY 85. Initiatives include the acquisition of wide-body aircraft load-handling equipment, and other aerial port rough terrain equipment for use in remote areas.[9]

The essential defining factor in strategic deployment remains the numbers of aircraft required to transport forces to the objective area. Postulating the type air assault forces envisioned, from battalion to division, clarifies our appreciation for the numbers and types of USAF aircraft needed to move these forces. In the absence of special tactical tailoring requirements, the following forces are presented with selected assets to obtain planning figures. Force packages for deployment usually do not consider units smaller than the battalion task force. Shown below are three force packages and the required airlift sorties to move such forces:

-- Air Assault Battalion Task Force[10]

- o Infantry Battalion
- o Field Artillery Battery
- o FIST
- o Forward Area Support Coordinator/Forward Supply and Support Element-Package (BN) (2 UH-60, Medevac)
- o CSAC (12 UH-60s)
- o Air Cavalry team (4 CH-58; 2 AH-1S; 2 UH-1)
- o Attack helicopter team (4 CH-58; 6 AH-1S)
- o Brigade Aviation element (1 UH-1; 1 CH-58)
- o Medium lift helicopter element (4 CH-47)
- o Engineer Platoon
- o Air Defense Artillery Platoon

- o USAF TACP

USAF aircraft requirements for outloading this air assault battalion task force:

Aircraft	Sorties[11]
C-141B	62
C-5A	4

By way of comparison, an airborne battalion task force with comparable assets, less helicopter densities, requires 30 C-141 B sorties.[12]

— Air Assault Brigade Task Force[13]

- o HHC, Infantry Brigade
- o Three Infantry Battalions
- o Field Artillery Battalion
- o Forward Area Support Coordinator/Forward Supply and Support Element (BDE)
- o CAB
- o Medium Lift Helicopter Company
- o Air Cavalry Troop
- o Military Police Platoon
- o Military Intelligence Detachment
- o Signal Platoon
- o Air Defense Artillery Battery
- o Engineer Company with Heavy Equipment Package
- o Attack Helicopter Company
- o 3 Tactical Air Control Parties (BN)
- o 1 Tactical Air Control Party (BDE)

Air Force aircraft requirements for outloading this air assault brigade task force:

Aircraft	Sorties[14]
C-141B	188
C-5A	12

By way of comparison, an airborne brigade task force with comparable

assets, less helicopter densities, requires 174 C-141B sorties.[15]

— Air Assault Division:

- o 3 Infantry Brigades
- o Division Artillery
- o Aviation Group
- o Support Command
- o Engineer Battalion
- o Air Cavalry Squadron
- o Air Defense Battalion
- o Signal Battalion
- o Military Intelligence Battalion
- o Military Police Company
- o HHC

Air Force aircraft requirements for outloading an air assault division:

Aircraft	Sorties[16]
C-141B	858
C-5A	76

The airborne division requires 857 C-141B sorties for airland deployment.[17]

STRATEGIC SEALIFT

Another means of deployment is by use of sealift forces. The US has a total inventory of 450 military and commercial ships, which is considered adequate in terms of tonnage carrying capability. However, the ships do present problems in that they are not easily loaded or unloaded and their limited maximum speed of under 20 knots requires long transit times. A real concern is that the meeting of time-phased force deployment requirements of major contingencies could not be met. Recent

acquisition of SL-7 container ships and their conversion to roll-on roll-off (RO/RO) configuration will help eliminate part of this problem. Future requirements also call for additional fast RO/ROs, along with faster tankers, and barge carriers to meet worldwide deployment possibilities.[18]

All army helicopters are suitable for sealift transportation; however, some disassembly, preservation against salt water, and reassembly are required. These preparations can vary by type vessel used and the degree of salt water protection required. Figure 2 shows the average time to disassemble and reassemble for sealift movement.[19]

Helicopter Disassembly and Reassembly Times

	Disassembly			Reassembly		
Helicopter	Man Hours	Number of Men	Elapsed Hours	Man Hours	Number of Men	Elapsed Hours
CH-47	18.0	6	3.0	26.0	6	5.0
AH-1	6.0	3	2.0	10.5	3	3.5
UH-1	5.0	3	2.0	9.5	3	3.5
OH-58	4.0	3	1.5	8.5	3	3.0
UH-60	1.0	6	.1	1.0	6	.1

FIGURE 2

Requirements for sealift of the three air assault force packages are as follows:

-- Air Assault battlaion Task Force. Using one Lighter Aboard Ship (LASH) carrying 89 lighters or a Sea Barge Ship with 38 barges, an air assault battalion task force would require only one of either type ship. Personnel of the task force would be flown on passenger aircraft. All available cargo space on the ship would not be utilized by the task force; therefore, additional supplies could be carried.[20]

— Air Assault Brigade Task Force. Because of design and adaptability for transporting helicopters, the Sea Barge ship is chosen to deploy this force. The brigade requires three such ships with space for additional supplies. Again, deployment of task force personnel would be by passenger aircraft.[21]

— Air Assault Division. The air assault division requires one RO/RO ship with 150,000 sq. ft. deck space, three Sea Barge Ships, and one container ship. Personnel are transported by air.[22]

THE SELF-DEPLOYMENT DIMENSION

With the new family of helicopters, less the OH58 AHIP, the Army has gained a self-deployment capability that has recognizable potential for both intertheater and intratheater movement. Though not a major component in strategic deployability considerations, it is nonetheless a complementary feature of air assault forces when evaluated for deployability.

Intertheater Self-Deployment. Both air and sea lines of communications will be used for deploying helicopters and air assault assets. However, it is possible that these modes of transportation may not meet priority needs in a timely manner. Therefore, a case can be made for the self-deployment of contingency force helicopters from theater to theater. To be more specific, the CH-47, UH-60, and the AH-64 all possess the capability to lift sufficient fuel to meet intertheater deployment ranges. This concept would include the self-deployment of helicopters only and does not provide for the deployment of personnel and other equipment. In this scenario, USAF air/sea rescue and escort aircraft are assumed to be insufficient to provide support throughout the entire self-deployment operation. Thus, deploying helicopters

should be equipped to perform these required functions in over-water flight operations. Planning for this type deployment must be detailed and consists of considerable personnel, administrative, and logistical outlay. Utilization of flight routes assumes that diplomatic clearance can be obtained. Overall time requirements to self-deploy helicopters depend on the number of fuel kits used, enroute weather, and the number of ferry pilots assigned to support the deploying units. The operational concept of self-deployment includes using existing flight routes to Europe, Southwest Asia, Africa, and South America.[23] (For route details see figure 3.) Because of limited Air Force resources, self-deployment of Army helicopters would free up Air Force airframes for movement of other high priority equipment. Another option, the most economical and slowest, is sealift; however, time required for surface movement may preclude combat helicopters from meeting their operational dates, thus making a case for self-deployment.

SELF-DEPLOYMENT ROUTES

Europe/SW Asia	
Primary	Azores Route - Pease AFB, NH; ST John New Foundland; Lajes AFB, Azores; France; Germany.
1st Alternate	North Atlantic Route - Loring AFB, ME; Goosebay, Labador; Narsarssuaq, Greenland; Keflavik, Iceland; England; Germany.
2nd Alternate	Caribbean Route - Homestead AFB; San Juan, PR; British and French Guiana; Brazil; Ascension Island; Liberia; Morocco; Spain; Germany.
Africa	
Primary	Azores Route
Alternate	Caribbean Route

South America

Primary	Caribbean Route
Alternate	Central American Route - Corpus Christi, Texas; Villahermosa, Mexico; Howard AFB, Panama; Venezuela; Brazil.

FIGURE 3

When considering self-deployment of helicopters, disadvantages must also be considered. The most important disadvantages are that helicopters are not designed for long endurance flights and must stop frequently for fuel and crew rest; these conditions may increase time required to meet operational dates. Additionally, time flown during the deployment phase will decrease operational flying hours before maintenance requirements must be met in the operational objective area. Self-deployment should only be considered as a gap filler between airlift and sealift and not a primary mode of movement except under certain conditions.

Intratheater Self-Deployment. Though current helicopters entering the inventory possess a limited worldwide self-deployment capability, the primary benefit remains the capability for intratheater deployability because of the extended flight range.

When considering intratheater deployability, the air assault force is uniquely suited for redeployment within an area of operation utilizing its own organic helicopters. Heavy forces are not equipped with sufficient numbers of heavy tactical equipment movers to perform intratheater moves and must rely on rail or wheel assets that are non-organic and in short supply. Large heavy units, moving slowly and parallel to enemy positions, present lucrative targets. Such risks can be significantly reduced by the use of light, fast moving air assault forces. In

many areas of the third world and developing world, there is limited road and rail development, which is further aggrevated by adverse terrain and weather conditions. These conditions highlight the need for light, extremely mobile units that are not subject to surface conditions in such a theater of operations. No force can better accomplish intratheater deployability than air assault units taking into account extended flight endurance.

In summary, the self-deployment of selected helicopter assets to an objective area provides additional lift options for both intertheater and intratheater movement planners. Self-deployment is not a panacea to the strategic lift problem, but it can be a gap filler if necessary. As follow-on modifications of the current helicopter fleet reach production, there are programmed changes that expand this self-deployment capability.[24] As this capability for self-deployment increases, the prominence of intertheater self-deployment will increase as an option.

AIRLIFT/SEALIFT COMBINATIONS

To move the air assault division exclusively by air ties up virtually the entire MAC airfleet for the better part of two weeks. Destination, arrival airfield conditions, routes used, and other variables can extend this timeframe. Obviously, other critical needs in the overall plan for the projection of combat power, e.g. early forward placement of tactical air resources, compete for the available airlift. The priorities of power projection compel us, therefore, to look at airlift/sealift combinations.

By the time President Carter promulgated the "Carter Doctrine" in 1980, attention had already been focused by Army planners on movement

simulations designed to determine the optimal combination of airlift/sealift assets to move the air assault division or an air assault brigade task force.[25] Actual movement in the combination mode had been performed by two-thirds of the 101st in its deployment on Reforger '76.

Airlift/Sealift combination for movement of air assault forces has the following advantages and disadvantages:

— Advantages

- o Reduced shipping costs.
- o Volumetric loading flexibility for helicopters.
- o Airframes can be reduced to minimum required for movement of troops.
- o Allows for force tailoring that would provide a combat capable and operational force at a relatively early time in the deployment sequence.
- o Ship movement maintains helicopters in as close to fly away configuration as possible; disassembly and preservation requirements are minimal.
- o Depending on extent of emergency, combination reduces MAC surge in flying-hours.
- o Enhances flexibility and capability in movement of sustaining supplies.

— Disadvantages

- o "Slow" and "fast" ship departures must be coordinated.
- o Build-up of tactical power for air assault forces is tied to the availability of a proper mix of helicopters. A significant number of helicopters must be air lifted for the force to become tactically effective at

an early date. Early tactical efficiency of the force could be impeded and, depending on enemy situation, endangered by arrival sequence of sealift helicopter loads.

- o Requires proper sequencing of movement of supplies, especially fuel and ammunition, into the objective area. Significant amounts of fuel and ammunition must be airlifted if the air assault force is to be a tactically viable one at an early date in the deployment.
- o Aerial port and sea port facilities could bottleneck operations in lesser developed countries.
- o Sealift would be especially vulnerable to hostile actions if they developed prior to completion of movement.

The reality of limited MAC capacity dictates sealift/airlift combination for the movement of the entire air assault division. There is an exception in the case in which the air assault division would be the only force involved and the premium would be on a full surge airlift into the objective to achieve tactical effectiveness as early as possible. The more likely situation, that of the airlift/sealift combination, would result in the division deploying its combat elements and minimum sustaining forces in 43xC-5As and 229xC-141As and the follow-on elements in one Sea Barge ship and one RO/RO ship.[26]

The air assault brigade task force emerges as a flexible configuration for deployment in the combination mode. The combat elements of the brigade could be moved by air. Requiring about one-quarter of the sorties needed to move the division, the brigade task force would be

operational at an early time in the deployment sequence, and much of the sustaining supplies and equipment could be brought in by sea. A standard loading configuration projects 37xC-141A sorties and one Sea Barge ship to move the brigade task force in two echelons.[27]

Airlift/Sealift combination deployment, in sum, is a realistic method to handle volumetric shipping requirements, to reduce helicopter disassembly/reassembly procedures, and to meet heavy sustaining supplies demands; but the combination mode could, depending on the distribution between sea and air and the arrival sequencing, negate the actual ability to project readily operational combat power, with weapons systems functional, at the time and place and in a manner which could deter or rapidly contain actual confrontation.

CONCLUSIONS

Air assault forces can be a vital component of power projection strategy. They possess the capability to fight and survive across the complete conflict spectrum, though their unique mobility differential argues for a high position in the order of priority contemplated by deployment planners. Without regard to the likelihood of the requirement but rather with respect to the suitability for the task, this study proposes these priorities:

- Low-intensity, third world contingencies
- Mid-intensity, developing or developed world contingencies
- High-intensity, NATO commitment

Recognizing that aspect of power projection that includes "firstest with the leastest," planners should carefully evaluate the effects of air assault force when included among the "leastest."

The cost in strategic airlift to transport air assault forces may be more than offset by their extraordinary mobility factor once deployed. Regardless of the employment options selected, air assault forces can at once be visible or concealed, can be at a staging base or located 380 nautical miles away in two hours. The intratheater mobility factor may be the single greatest offsetting argument to the cost of strategic airlift. Once deployed, the air assault force can move significant distances within the contingency area; they can move quickly from a third country staging area into the contingency region and back, if necessary. The air assault is the only force that can accomplish this task in any contingency area in the world.

Air assault forces can deploy by airlift or sealift, or by combinations of the two modes. Additionally, the helicopters, with the exception of the OH-58 AHIP, have an intertheater self-deployment capability. There are numerous permutations involving force packages and strategic lift assets that pertain, but there emerges an arguable priority that balances advantages gained by the deploying force with the cost in strategic lift. Generally, the following priority pertains:

- Up to a single air assault brigade task force, the deploying unit should move exclusively by USAF airlift; the requirement for 188 C-141Bs and 12 C-5As is not excessive if only a single brigade is to go and the effect of rapidity is an obvious factor.
- If multiple air assault brigade task forces deploy, then the combat elements of the brigade should go by airlift and the follow-on, long term logistics support would follow by sealift.
- If airlift is severely limited and rapidity is essential,

then employ the intertheater self-deployment capability of the helicopters. For every eight UH-60s that self-deploy, one C-5A or 4xC-14ls are saved.

Scenario variations could affect this order and manner of deployment, but it remains a defensible base case for evaluating the deployment options for air assault forces.

CHAPTER III

ENDNOTES

1. Paul K. Carlton, General, "Military Airlift for Strategic Mobility," Strategic Review, Winter 1974, p. 27.

2. Oren E. DeHaven, LTG, "Strategic Mobility: Shortfalls and Solutions," Defense 82, March 1982, p. 11.

3. Barry M. Blechman, et al, Military Force as a Political Instrument Since the Second World War: Policy Implications, (Washington, 1975), p. 9.

4. This notion of "firstest with the leastest," an inversion of Nathan Bedford Forrest's dictom, enjoys currency in both diplomatic and military arenas. The idea hinges on the premise that an appropriate size force that is first into a disputed or troubled area instantly seizes the initiative and simultaneously throws the burden of confrontation and conflict on the slower adversary. Presumably, the decision for confrontation is sufficiently painful that the force in place deters such an eventuality.

5. US Organization of the Joint Chiefs of Staff, United States Military Posture for FY 1983, pp. 3-14 (hereafter referred to as JCS, Military Posture FY83).

6. US Department of the Army, U.S. Command and General Staff College, RB 1-1: Aviation, Fort Leavenworth: July 1981, p. 46.

7. US Department of he Army, U.S. Army Aviation Center and Fort Rucker, "Chapter 9, Strategic Deployment," Army Aviation Mission Area Analysis, Fort Rucker: undated, p. 9-11 (hereafter referred to as "Strategic Deployment, AAMAA").

8. JCS, Military Posture FY83, p. 55.

9. Ibid., p. 98.

10. US Department of the Army, 101st Airborne Division (AASLT), Readiness Standing Operating Procedures (RSOP), Fort Campbell: 21 January 1982, p. C-1-2 (hereafter referred to as "101st, RSOP").

11. US Department of the Army 101st Airborne Division (AASLT), "Untitled Division Transportation Officers Computer. Run Airlift Requirements, J-series TOE," Ft. Campbell: undated (hereafter referred to as "101st, Airlift Requirements").

12. US Department of the Army, 82nd Airborne Division, "Untitled G3 Chart for Airlift Requirements." Fort Bragg: 17 December 1981 (hereafter referred to as "82nd Airborne, Airlift Requirements").

13. 101st, RSOP, p. C-1-2.

14. 101st, Airlift Requirements.

15. 82nd Airborne, Airlift Requirements.

16. 101st, Airlift Requirements.

17. 82nd Airborne, Airlift Requirements.

18. JCS, Military Posture FY83, p. 55.

19. Strategic Deployment, AAMAA, p. 9-20.

20. US Department of the Army, U.S. Army War College, "Section F, Force Planning List," Strategic Mobility War Game: Game Book (DRAFT), (Carlisle Barracks: 14 April 1982). P. F-3 indicates that 2.7 ships are required to transport an air assault brigade task force. Therefore, it is reasonable to assume that an air assault battalion would require only a third as much surface transportation as a brigade.

21. Ibid.

22. US Department of the Army, US Army War College, Strategic Mobility War Game: Planning Guide (Draft), (Carlisle Barracks: 14 April 1982) p. C-7.

23. US Department of he Army, US Army Training and Doctrine Command, TRADOC Pamphlet 525-8, US Army Aviation Self-Deployment (Fort Monroe: 6 March 1981), p. 7.

24. Strategic Deployment, AAMAA, p. 9-55.

25. US Department of the Army, US Army War College, Military Sealift: Study Supplement, (Carlisle Barracks: 5 October 1981) Appendix H, pp. 23-26. The simulations assumed movement to a "developed" as opposed to a Third World contingency area where seaport and aerial port limitations would extend operations.

26. Ibid., p. 23.

27. Ibid., p. 25. This is a notional airlift/sealift combination of an air assault brigade task force deployment to Germany.

CHAPTER IV

EMPLOYMENT OF AIR ASSAULT FORCES

INTRODUCTION

Sir B. H. Liddell Hart has observed that the guiding principle in structuring the tactical units of an Army must be to adapt its formations to the"conditions of fire."[1] He also relates how, as firepower dominated the battlefield, the opposing armies of World War I hurried to search out an open flank until the sea boundary closed out all movement, frontal attacks broke down, and the belligerents became locked in static trench warfare.[2] It is a commonplace in any modern tactical commentary on land warfare that two products of the mechanized age, tanks and air vehicles, have restored maneuver — even in the face of increasing lethality — to the battlefield. Nonetheless, this chapter on the employment of air assault forces is premised on a recognition of the continuing need to adapt tactics and formations to the "conditions of fire" expected on the fluid and non-linear battlefield. As previously stated in this study, FM 100-5 repeatedly emphasizes the fundamental value of maneuver to success in the AirLand Battle. In the appendix on principles of war, FM 100-5 defines maneuver as a means to "Place the enemy in a position of disadvantage through the dynamic application of combat power."[3] Elaborating on the maneuver principle, FM 100-5 comments that:

> Maneuver is the dynamic element of combat, the means of concentrating forces in critical areas to gain the advantage of surprise, position, and momentum which enable small forces to defeat larger ones.[4]

To fulfill the dynamics of maneuver outlined in FM 100-5, the tactical commander will strike deep into the enemy's echelonment so as to unhinge the opposing commander's plan.[5] In theory, air assault operations constitute an idealization of the maneuver principle and one of relatively few maneuver-based, force-disruption defeat mechanisms[6] available to conduct deep tactical strikes. Air assault forces would appear to possess, again using terms from FM 100-5, the inherent "agility that is necessary to shift forces and fires to the point of enemy weakness."[7] With the maneuver imperative of the new doctrine and the continuing need for innovation in mind, the purpose of this chapter is:

-- to set forth the historical context in which the air assault concept evolved,

-- to review current thinking on the tactical employment of air assault forces as derived from theoretical discussion, the language of FM 100-5 and other written sources, and in the more practical terminology of field practitioners,

-- to look into the vulnerability/survivability controversy surrounding air assault operations, and

-- to present conclusions to the overall discussion on employment.

The ideas brought together in this chapter about the employment of air assault forces are not only extant today, but also project forward from the basis of emerging technology and force structure. The literature assessed on the subject projects the collected wisdom on air assault to

Division 86 and beyond. This chapter also provides commentary or reaction to some aspects of the tactical philosophy promulgated in the new FM 100-5. Air assault forces have capabilities and limitations. Thus, this chapter considers in a historical, theoretical, and practical context the question of what air assault forces do best and whether these capabilities are worthwhile when viewed in the light of their limitations.

EARLY OPERATIONS

The air assault/airmobile tactical continuum can profitably be examined through its historical evolution. Having emerged from the fledgling air mobility methods begun in the Korean War and improved upon extensively in Vietnam and through the continuing vanguard efforts of the 101st Airborne Division (AASLT), the air assault concept is still in its infancy in relation to its potential. The technical means to provide localized, repetitive air mobility to ground forces, the helicopter, came only lately into existence as a practical vertical take-off and landing, hover-capable machine in 1938 in the form of the German Fock-Achgelis FA61.[8] By the late 1940s, helicopters capable of lifting useful military payloads were being built by Sikorsky. Seizing on the idea of vertical envelopment in the amphibious assault, the Marine Corps tested its first helicopter squadron in 1947 and by May 1948 was conducting tactical training in ship-to-shore trooplifts.[9] Michael Hickey records that:

> The Korean War . . . was a testing ground for the new concept of tactical mobility as it saw the first use of the helicopter by the US Marines and Army as a battlefield aerial vehicle . . . There was much movement of troops by helicopter, but only a few trooplifts were attempted in the face of the enemy and none of these came under fire.[10]

In 1951, prior to the creation of the first organized Army helicopter units, Marine Squadron 161 (H-19s) was organized at El Toro, California. Deployed to Korea in the summer of 1951, this unit initially flew resupply missions and in October of that year provided the trooplift for a relief operation involving two Marine battalions. Later the Marines employed helicopters to insert reconnaissance teams and antiguerrilla patrols into position and to conduct resupply runs into difficult terrain. In November, the Marines conducted a second helicopter-transported relief operation of two thousand troops. After training two H19 cargo helicopter companies, the Army deployed the first of these to Korea in December 1952. Initially flying resupply and medical evacuation missions, the unit executed its first troop haul, the transport of a Republic of Korea regiment during a relief operation, in May of 1953.[11] John R. Galvin (then Lieutenant Colonel, now Major General) relates the following:

> The Army finished the Korean conflict with two helicopter companies organized as a light battalion; the marines by the end of hostilities had created ten helicopter transport squadrons, all of them engaged in training operations with the various marine regiments.[12]

Following the Korean War, the tactical approach of the Marines and the Army in the use of helicopters differed in emphasis. By 1959 the Marines were developing tactics for the employment of large helicopters in the vertical envelopment to place relatively self-sufficient forces into assault landing zones from which they could attack a defended position. The Army, meanwhile, concentrated on the movement of small, cavalry-type units in small helicopters and in combination with the maneuver of armored forces.[13] Interestingly, this difference in emphasis established polarities for the tactical employment of the helicopter-ground-combined arms force that still serve today as boundary

distinctions. These polarities represent the ends of a bell curve. During the intervening years the hump of the curve has been a zone of tactical experimentation: on the one hand, using a single or few helicopters to move a small force by stealth and dispersion, or on the other hand, moving a relatively large tactical force with a great many helicopters in the air at once to or near an objective area where traditional infantry ground missions would be undertaken.

Concurrently with development of airmobility operations in the Marine Corps and Army, the French Army pioneered the integration of the helicopter into ground tactical operations during the Algerian campaigns of the mid-fifties. Indeed, the French declared that "Tanks, aviation and artillery are nothing but means of support, whereas in Algeria the helicopter represents the maneuver itself."[14] The British Army profited by its experience in airmobile operations during this same period in Malaya and Borneo. Woefully short of combat troops, the British commander in Malaya, General Sir Walter Walker, made intelligent use of the third dimension, summarizing his doctrine as follows:

> . . . The fewer helicopters you had, the more troops you required . . . give a hundred men helicopters and they will do the work of a thousand . . . a battalion with six Wessex helicopters was worth more to me than a brigade without them . . . .[15]

In November of 1956, British Army units executed the first ship-to-shore heliborne assault under fire at Port Said. The United States Army convened the Howze Board in 1962 to assess the comprehensive role of Army aviation on the modern battlefield, formed and field tested the 11th Air Assault Division, and from this point onwards led the way in the refinement of large scale airmobile operations, conducted in the jungles of Vietnam.

During Howze Board testing, opinions polarized around two groups: "Heavies" argued that airmobile units did not have the staying power to oppose regular units in a hard fight and "Lights" maintained that airmobility would open up the battlefield, cause the enemy to deploy against a wide-ranging threat, and thus become vulnerable to airmobile attacks at his weakest points. Both "Lights" and "Heavies" proved correct in the computerized games used for assessment:

> The airmobile forces did not have the strength to slug it out against units strong in armor and artillery, in areas where the enemy supply lines were well developed . . . . the real answer was not the Heavy . . . or the Light view, but a combination. Airmobile units would not be the only forces on the battlefields. There would be a "mix" of tanks and helicopters -- and of air force tactical fighter-bombers as well as all other power that could be brought to bear . . . .[16]

An important and often overlooked recommendation of the Howze Board was "the requirement for complete integration of airmobility into the force structure in balance with the other tactical concepts."[17]

> The basic statement of the Howze Board report is the assertion that a wide variety of airmobile operations is feasible, including air assaults, air cavalry operations, aerial artillery support, and aerial supply lines.[18]

What is essential now, as then, is to develop the right combination synchronized into a well-planned organizational concept consistent with the AirLand Battle doctrine emerging in the 80s.

The air assault concept finds its genesis in this historical framework. The modern doctrinal impetus emerged in 1963 from a watershed article entitled "The Mobility Differential" written by Lieutenant General James M. Gavin for Army Journal. General Gavin foresaw the demise of old-style airborne warfare involving parachute delivered forces except for "strategic troop deployments over long ranges, when airlanding was impossible and the prompt arrival of military force by the most dramatic method would still achieve results . . . ."[19] He

prophesied a NATO scenario in which:

> . . . the attacking enemy was attempting to brush aside the NATO defenders' screen of lightly equipped units, pairs of light reconnaissance helicopters would operate well forward, identifying the enemy, preventing him from achieving surprise, bringing down the fire of all available artillery and controlling Allied airstrikes in order to disrupt and delay. "Support helicopters," capable of lifting up to 12 fully equipped troops, would give the defending commander tremendous mobility, seizing threatened points and holding them if necessary in order to buy time. "Command helicopters" . . . would be used to control the fast-moving airmobile battle. Larger helicopters would provide mobile logistic support, shifting stores, weapons, fuel and supplies up to the forward combat zone.[20]

The development of vastly more capable assault and medium lift helicopters has greatly extended the possibilities of General Gavin's vision as has the advent of the modern attack helicopter with its standoff armor killing capability. Added to these improvements are the antiarmor missiles in the hands of infantry, which helicopters quickly cycle and recycle to critical points on the battlefield, the existence of specialized air assault training, and the continuing refinements in organization and techniques -- the result has been the evolution of the air assault concept from the airmobility framework.

TACTICAL EMPLOYMENT

Certain salient realities apply to air assault operations. The coming of the helicopter changed airborne warfare. Parachute delivered troops had, heretofore, been foot mobile once delivered into the battle area. In Maurice Tugwell's words the helicopter brought,

> Such features as speed into action, the ability to mount a raid from the immediate battle area, accuracy of delivery, relative disregard of difficult weather conditions and continuity of troop mobility after the initial landing for redeployment or withdrawal . . . .[21]

In addition, air assault forces generally are able to retain tactical

integrity during the landing phase of operations. Assembly problems upon landing are miniscule in comparison to conventional parachute assaults, especially at night. Foot mobility of air assault infantry is incidental to the final phases of any mode of ground employment. Plans for employment of air assault infantry must never lose sight of such a force's essential dependency on helicopter assets to:

- Insert, reinforce, reposition forces at opportune times while tactical operations are in progress.
- Provide rapid augmentation of firepower.
- Sustain logistically.
- Provide vital command and control links.

If an air assault force cannot fly, it cannot fight — as an air assault tactical entity. Because of their range of action, air assault operations will inevitably strain the C^3I (command, control, communications, intelligence) apparatus so vital to its effective employment. Control of integrated helicopter and ground operations will be extremely difficult to achieve on an ad hoc basis or the modern and future battlefield. To assert that high degrees of competency and professionalism in the separate parts of a hastily assembled "airmobile" task force will substitute for the advantages of teamwork developed through habitual association seems untenable in the light of recent experience.

Air assault forces seek to maximize the unprecedented maneuver potential and tactical radius of action of the helicopter. In the offensive, air assault forces move rapidly to capitalize on enemy weakness or disorder in his battle dispositions. Some exposed portion of the "over-the-top-flank" is sought out and exploited by vertical envelopments varying in scale, composition, and objective. In the defense,

air assault units, still operating chiefly in an offensive mode, recycle lift assets to reposition forces rapidly and economically to convert weakness into strength and to turn natural conditions to advantage, e.g. rapid movement of a task force into a forested or built-up area to serve as a pivot of maneuver in conjunction with counterattacking heavy forces. Mere occupation of static positions for extended periods by air assault forces is antithetical to the air assault maneuver concept. To maximize maneuver in the defense, air assault forces should conduct spoiling and counterattacks in support of defensive operations by other forces.

Air assault forces may frequently operate from a dispersed area, removed a significant distance from the main battle area, and could be looked upon as a tactical reserve. Such a reserve force enjoys, by virtue of its ability to maneuver rapidly over extended distances, considerably more flexibility for ultimate commitment to battle than does a ground-mobile force. Just the presence of air assault forces in the theater threatens the enemy commander with surprise attacks which could disrupt and paralyze his rear. The enemy commander must have a plan to counter this threat. He might be disposed, in anticipation of an air assault strike, to drain off some of his forward units to protect his lines of communication.

Logistical support of air assault forces, especially ammunition, fuel, medical evacuation, and downed helicopter evacuation requires careful planning and innovative, bold techniques so as not to become an unacceptable limitation on operations.

Air assault forces will frequently operate beyond the ranges of supporting artillery. Therefore, such a force must often take its fire support with it in the form of:

— Attack helicopters

— Air cavalry teams

— Close air support

— Accompanying artillery (and organic mortars) and coordinated artillery raids

Air assault forces capitalize on their continuity of maneuver capability to shape opportunities for victory in the most remote part of the battlefield. Air assault forces, in summary, move rapidly and efficiently by air in concert with systematic suppression of enemy air defenses; fight on the ground as combined arms teams supported by air reconnaissance, attack helicopters, and close air support; maintain momentum and maneuver continuity by recycling lift assets supported by forward rearm and refuel sites; and displace command and control nodes by air to conform to the level and type of operations.[22] The primary strengths of air assault operations are terrain/obstacle independency, speed of execution, flexibility, and ability to generate and shift rapidly combinations of ground and air combat power, usually enjoying the element of surprise in the process. Significant limitations are lack of ground mobility means (virtually exclusive reliance on helicopter mobility), effects of weather extremes, and sensitivity to the enemy's air defense array, especially in light of the helicopter's low degree of armor protection. The limitations are accepted "on purpose" as an unavoidable consequence of being tactically tied to helicopter lift performance. Ironically, air assault forces derive their strengths and weaknesses from the same source, the helicopter.

FM 100-5 DOCTRINAL DERIVATION OF MISSIONS

A closer investigation of the language and commentary of FM 100-5 permits a doctrinal derivation of missions, roles, and guidelines for employment of air assault forces.[23] This derivation together with the historical and theoretical observations will then be set against the practical thinking on the tactics of employment of air assault taken from the Division 86 Concept and other field sources.

The Preface to FM 100-5 states that:

> U.S. Army doctrine balances firepower with maneuver, stresses combined arms warfare, and requires cooperation with sister services and allies. It emphasizes tactical flexibility, speed, mission orders, the initiative of subordinates, and the spirit of the offense.[24]

This statement presents an ideal setting for the synchronization of combined arms elements and fluid operations that is the heart and soul of air assault operations. It coincides with the spirit, initiative, specialized training, and pride in being elite fostered by air assault unit leaders in the Army today and also with the statement in FM 100-5 that "The fluid environment of modern war will place a premium on leadership, unit cohesion, and . . . independent operations. The stress on soldiers and units will be greater than any experienced in history."[25]

The contemplated battlefield environment for the remainder of this century, alluded to somewhat figuratively in an earlier paragraph as the "conditions of fire," must shape the evolving structure of tactical organizations and their tactics. The question of vulnerability/survivability will be addressed further on, but a general threat definition should be posited at this point:

> The high threat environment is an enemy combat posture wherein modern, sophisticated weapons and techniques create a highly

> lethal situation with the intention of establishing control over territory and airspace contiguous to that territory. Such a posture could include armor, field and antiaircraft artillery, surface-to-air missiles and tactical fighters which would be directed by radar, infrared, optical, electro-optical and visual means and might be supplemented by electronic warfare methods to include jamming and deception.[26]

The Army and its air assault units could be called upon to conduct operations in the extreme threat conditions just set forth, to include a worst-case situation involving NBC warfare. In the high threat scenario we can expect the Soviets, or forces modelled on the Soviet pattern, to make deep penetrations as they go all out to sustain rapid offensive movement. A blurred, nonlinear state of combat will likely ensue. As the force-oriented central battle unfolds under, at most, temporary conditions of linearity, fighting the deep battle becomes of supreme importance. We will be fighting at the end of long supply lines, our rear areas will be subject to various forms of attack, and effective command and control will be extremely difficult to maintain. There will be unremitting demands for great initiative and flexibility on the part of subordinate commanders. On such a battlefield, a lack of cohesion born of poor or erratic training prior to the onset of battle must inevitably spell defeat.

As introduced in Chapter I, the Army's operational concept for fighting the AirLand Battle has at its crux the indirect approach of waging the deep battle by every means available to "degrade the coherence of enemy operations."[27] This approach seeks to locate and paralyze the enemy's central nervous system -- destroy his command and control centers, kill or capture his key leaders, disrupt or destroy his supply system, put his special weapons sites out of action; in other words, go after his soft underpinnings to bring about the isolation of "his committed forces so they can be destroyed."[28] We might, as another

example, go after the enemy's helicopter rear laager sites as one of the best of actions to preempt hostile air assaults directed against our own rear area targets. Ideally, if we can surprise his generals at breakfast, we may not be required to kill every enemy soldier or destroy every tank before a total collapse ensues.[29]

Proceeding from this controlling operational concept, FM 100-5 suggests and specifies a broad list of missions for air assault forces. These missions, roles, and guidelines are summarized as follows: (applicable FM 100-5 page numbers are listed after each observation)

- Employ air assault forces to traverse obstacles such as forests, marshes, and mountains or to occupy such features to block, channelize, or delay enemy armor. (3-9, 3-10, 3-21, 3-22, 8-11)
- Effective jungle warfare is predicated on the employment of lightweight air assault units to achieve a force multiplier effect by overcoming the fatigue and difficulty of cross-country movement and resupply problems. (3-24)
- Owing to their strategic deployability, airborne and air assault forces could bear the brunt of early fighting in a desert contingency area. (3-25)
- Air assault units must be prepared to conduct relief, resupply, reconnaissance, and combat operations in arctic regions. (3-28)
- "Air maneuver units, airborne or air assault troops . . . can also be used in conducting the deep battle." (6-26)
- "The speed of . . . air assault forces makes them uniquely valuable for the conduct of turning movements . . ."

(7-15)

- Air assault units are one of the primary means for attacking high value targets in the enemy rear and to seize key deep terrain objectives. (8-19)
- Air assault forces will be employed in the exploitation to seize river crossing sites, defiles, cross obstacles, attack communications nodes, and cut off the disorganized enemy.
- During pursuit operations "Maximum use should be made of air assault . . . units . . . ." (8-41)
- Air assault forces can be used to perform the blocking role during encirclement operations. (8-42)
- In the defense, air assault forces will be employed to accomplish early seizure of key terrain and hold until the arrival of heavy forces. (9-2)
- Air assault forces can be committed rapidly from a defensive reserve role and are a responsive means of providing rear area security. (10-16)
- Air assault forces can move rapidly and with surprise to occupy strong point defensive positions in urban areas. (10-21)
- During friendly withdrawal, air assault units are of great value in securing flanks, delaying enemy armor, and disrupting his echelonment. (11-21)
- "Army forces in contingency operations should be relatively more mobile than their potential enemy." (16-9)

The charter of operations voiced here states or implies missions for air assault forces across the total gamut of Army contingencies and tactical

roles worldwide, though there is no specific attempt to address a priority in the employment options. In the ideal sense, the lower the threat in a particular conflict area, the more effective should be the level of performance of air assault units; but this charter so broadly requires air assault units for the conduct of the deep battle aspects of tactical operations as to argue logically for the proliferation of air assault forces in NATO now. The air assault brigade would appear to be the appropriate configuration for organization and training because of its C^3I capability and flexibility for specific task force configurations. The tactical commander must have at hand this tangible means for conducting the range of deep battle operations expected of him. The recently distributed pamphlet on Soviet Military Power publicizes that the Soviets are organizing in a manner to capitalize on the increased numbers of helicopters coming off the production lines. The pamphlet freely acknowledges that the Soviets have introduced Air Assault Brigades at the front level.[30] In this recognition of structure adjustment, the Soviets have apparently emulated U.S. Army air assault developments and may even have introduced an early style of fixed brigade concept.

AIR ASSAULT DIVISION 86 CONCEPT

The Combined Arms Combat Developments Agency's (CACDA) concept for Air Assault Division 86 is in line with the generalized outline of employment developed so far in this chapter:

> An essential feature of the air assault division is the short response time, flexibility, and speed of execution that characterize air assault operations . . . . The increased mobility of the division enables the commander to concentrate his forces quickly at the decisive points on the battlefield . . . . Air assault operations are characterized by

> rapid execution and timely withdrawal based upon detailed prior planning. Rapid execution of successive operations enables air assault forces to seize and maintain the initiative, and to avoid becoming engaged by superior hostile forces or defeated in detail. The constant threat of air assault operations causes the enemy to allocate combat forces to protect . . . rear areas. A significant advantage is created by the ability of air assault forces to detect and select concentrations of enemy forces. They . . . attack . . . disengage, and withdraw or move on to initiate subsequent attacks . . . before enemy forces can effectively react . . . . The air assault division is capable of conducting operations in the same environments as other divisions.[31]

This concept stresses the maneuver dynamics of air assault forces and that such forces are not intended to meet heavy threat forces head-on in the open, but will seek to exploit a calculated advantage accruing to conditions of "surprise, terrain, threat, or mobility." The CACDA concept goes on to define specific roles and missions for air assault forces as follows:

- -- Seize and hold vital objectives until linkup with supporting forces.
- -- Exploit NBC weapons effects.
- -- "Rescue US nationals besieged overseas."
- -- "Reinforce forward-deployed forces (if augmented with ground transportation)."
- -- "Serve as a strategic or theater reserve."
- -- "Conduct large-scale tactical or strategic raids."
- -- "Occupy areas or reinforce friendly or allied units beyond the immediate reach of ground forces."[32]

The Division 86 concept projects the air assault division in operation under corps (initially as corps reserve) or joint task force control, but capable of independent operations.[33] The concept envisions the panoply of missions derived doctrinally from FM 100-5, covers the offensive, defensive, and retrograde spectrums, and recognizes areas of

interest and influence "greater than those of the heavy and light divisions."[34] The concept stresses the extensive aerial surveillance and armed reconnaissance capabilities of air assault forces and, thus, the particular suitability of air assault forces in the covering force role during movement to contact and for the main defensive force. "The air assault division conducts this type operation using increased airmobility, surprise, and organic firepower. It withdraws rapidly under cover of suppressive fires after the desired results are obtained."[35]

Additional employment roles identified are attack to seize key terrain or vulnerable targets in the enemy rear and to counter like operations by enemy airborne or air assault forces. Attack by air infiltration is also identified as a mission. The concept makes special reference to what is termed "mobility-oriented tactics" and points out along this line, that "the air assault division has the capability to attack the enemy second echelon in depth to delay, disrupt, and attrit the Threat force."[36] Such hit-and-run type actions would be conducted using dispersed and temporary forward operating bases.

The Division 86 concept emphasizes the contingency role of air assault forces. "The most likely area for contingency operations is the arid mountains/desert region found in several strategically important areas of the world."[37] Under contingency conditions, the air assault force would play a vital role in the three successive phases of deployment, lodgement, and buildup of forces. Air assault forces are a superb show-of-force mechanism. The ability of helicopter forces to range over wide areas and to menace scattered locations over a short time span creates a profound psychological impact from such tactical projection of combat power. Air assault forces would be expected to bear the brunt of

the protection role for the initial lodgement by capitalizing on its mobility to conduct deep security operations beyond 150 kilometers to identify, eliminate, or contain enemy threats.[38]

The Division 86 concept recognizes the versatility of air assault forces and designates, with one exception, employment roles that capitalize on the maneuver advantage and that are coextensive with FM 100-5 doctrine. That a reasonable use of air assault forces would be to "Attack against an entrenched enemy to breach forward defense belts"[39] is indeed subject to question, if not rejection.

VIEW FROM THE AIR ASSAULT DIVISION

The 101st participated in Reforger 76. The air assault division's roles and missions during this operation are highly relevant:

- Operating initially as Central Army Group reserve, the division was committed later to V and VII U.S. Corps.
- V Corps initially ordered the division to defend in sector, then to move locally to thicken anti-armor defense, attack the flanks of penetrations, and conduct raids against soft targets.[41]
- The division initially conducted rear area security operations upon moving to VII corps area, where it took up defensive positions in relief of an armored division. Though the division could not prevent initial aggressor success by mech/armor forces, it was successful later when employed over a wide front to attack enemy support forces, block enemy withdrawal, and force the enemy to fight in two directions.[42]

The division concluded the following from Reforger 76:

> With modest mech-armor augmentation, the Air Assault Division possesses sufficient firepower and mobility for successful offensive and defensive operations against sophisticated mech-armor forces on the mid-intensity battlefield of Central Europe. The key to this capability is the complementary nature of mech-armor (US or Allied) and air assault forces in coordinated operations.
>
> The Mobility Factor. The combination of mobility and lethal antiarmor capability in the Air Assault Division translated to combat power in constant motion. The ability to multiply its combat power by the rapid concentration of forces at the critical point and time impart to the Air Assault Division a vital role on the mechanized battlefield . . . air assault forces were able to stabilize enemy penetrations and to shock and confuse the enemy by attacking deep into his rear to destroy or disrupt his command and control centers and logistics bases.[43]

An independent FORSCOM assessment noted that the "conventional" sector defense in V Corps precluded the division employment of its combat-power-in-constant-motion approach.[44] The report concludes that the 101st:

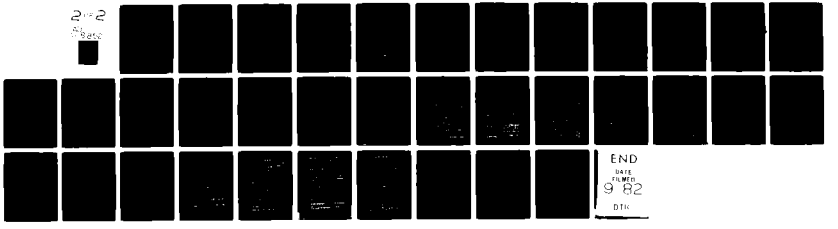
> is . . . a special mission force with principally offensive characteristics. These unique characteristics, while perhaps optimizing the division for other environments, severely restrict the division's adaptation to the more conventional requirements necessary for participation in the defense of Western Europe, as an Air Assault Division.[45]

In addition to recognizing the need for consideration of structure adjustment in air assault forces, the report further identifies the following appropriate missions:

- Defend in heavy terrain and built-up areas.
- Deny choke points to enemy armor.
- "Thicken and provide depth to the defense."
- "Hold flanks or shoulders of penetration."
- Rear area security (theater/corps).
- "Cross-line-of-contact to:

AD-A118 852 ARMY WAR COLL CARLISLE BARRACKS PA F/G 5/1
OPERATIONAL ALTERNATIVES FOR AIR ASSAULT FORCES IN THE 1990S.(U)
JUN 82 V E MICOL, D H CAMPBELL, D A BRAMLETT

UNCLASSIFIED NL



- o Attack exposed flank.
- o Cut supply lines.
- o Disrupt artillery and command and control facilities."

"An analysis of these missions indicate that most can be conducted by an appropriately organized and equipped force of less than division size."[46]

One of the FORSCOM reports most profound conclusions is that "from its reserve role, the division is likely to be tasked to respond to a developing tactical emergency . . . the division must fight where the emergency exists."[47] The Reforger 76 experience of the 101st thus provides valuable background for gaining a perspective for possible 1990's alternatives for employment of air assault forces in the NATO environment.

There now exists a firm consensus that air assault units are highly effective in a complementary role on the battlefield with mech/armor.[48] This method could encompass cross attachment of a brigade either way between an air assault or mech/armor headquarters. An air assault force is considered an excellent expedient to develop a vague or undefined tactical situation and can also strike deep into the enemy rear, with subsequent linkup.

Air Assault units can harass the enemy rear while heavy forces delay. Flying into inaccessible areas, over obstacles and bypassing enemy positions, air assault forces cause the enemy to react or disclose his intentions prematurely to other friendly forces.[49] The air assault force would consistently seek to turn adverse weather and night conditions to advantage and react rapidly to weight a critical point on the battlefield by committing attack helicopters.[50] Accurate and timely intelligence would be the crucial factor for the air assault force to

ensure superior relative combat power at a time and place of the air assault force's own choosing.[51]

The air assault division can function effectively in the corps covering force role. It is well-suited to conduct Rear Area Combat Operations (RACO). It can also conduct delay operations and similar flank screening, reconnaissance, and protection missions, engaging the enemy at long ranges so decisive engagement can be avoided,[52] though the aviation mobility can break down in the delay under heavy pressure.[53] Timing, advantageous use of terrain and reconnaissance, and carefully executed routines for breaking contact are minimum essentials for air assault delay.

The division's ability to maneuver supports the judgment that air assault forces can be highly effective in the exploitation and pursuit role or in a complementary role with land-bound forces engaged in this mission.[54]

Another idea in favor is that of crossing the FLOT (forward line of troops) or moving to laager sites located well to the enemy's rear and going after light targets in hit-and-run rapid withdrawal fashion.

The show-of-force value of air assault forces in a contingency context, which seeks to maximize the impact of a machine-intensive, martial presence projected over a wide area in a short time, is well recognized.

The air assault division trains to fly and fight at night. After selecting the best routes (e.g. forests, swamps, and marshes), using all available enroute and indirect suppressive measures, employing air cavalry/attack helicopter point and flank security, and operating in a dispersed manner, air assault forces strike swiftly across the FLOT at

night employing low-level flight and using night-vision goggles and modern navigation aids, such as Doppler navigation aboard the VH60. These pilot skills are extremely perishable and dependent, to a significant extent, on habitual training interaction with ground tactical elements. Repeated penetrations along the same route through a hostile air defense array are not intended and not considered feasible in a mid-intensity environment. Tactically tailored small units, platoon and company teams, will be employed, taking advantage of both the range (380 nautical miles one way) and the 18-22 man seats-out capacity of the UH60. These units will be pared to fighting weight, with ammunition, mortar shells, demolitions, mines, some water, and perhaps no food. They will hit select "soft" targets in the enemy's cluttered rear when the enemy's air defense alertness is at its lowest ebb. At the conclusion of the raid, they will recall their lift and security assets, laagered near the objective area, and withdraw. False insertions will be used to confuse the enemy's reaction.

> Because the enemy commander's decisionmaking process is vastly complicated by numerous small air assaults, it should be the norm rather than the exception to launch as many as practicable, fast and deep in the enemy's rear, to increase our probability of success . . . the actual numbers and types of aircraft used in the operations are exceedingly difficult to determine.[55]

Aviators are the strongest proponents of using standardized procedures that have been practiced with ground elements. Night operations are considered infeasible unless this expertise exists, yet are considered the norm for success on the future battlefield. An adjunct of such operations would be to emplace small stay-behind patrols to keep a HUMINT network functioning. Accurate intelligence, as noted, is a crucial factor in all aspects of the deep battle.

The division does not overlook its capabilities in the defense, but

prefers to remain as active as possible in this role. It would exploit every opportunity to strike the enemy's flanks or other weaknesses in his dispositions. Recognizing that an active air assault role in concert with mech/armor forces is the best combination for defensive operations.

The NATO area weather factor, dense air defense array, and density of enemy armored forces are prominent in the tactical thinking of the current air assault division. The division relies on its night fighting capability in mid-intensity combat and asserts that it "is prepared to go to the NATO theatre or any where else in the world if called upon."[56] It views the role of air assault forces as multi-purpose and multi-locational and recognizes that weather conditions and logistics support must be managed in a way that favorably shapes tactical freedom of action. Unfavorable density altitude conditions can dictate the ordinance load for the attack helicopter and thus restrict tactical operations. In contingency or NATO operations, the 101st CSS would depend on being able to "plug-in" to corps level support stocks in all classes of supply or being able to survive at the end of a long air or sea LOC from outside the theater. The availability of fuel and ammunition sources would be of the highest criticality.

The DRB-1 (Division Ready Brigade) would normally move as the first task force entity in the event of a strategic deployment requirement and is a basic tactical fighting configuration for the air assault division. This task force would contain a logistics coordination/operator cell from the DISCOM. Designated the FASCO (Forward Area Support Coordination Office), this cell would control brigade logistics functions of the DISCOM slice elements supporting the task force in the operational area. The task force would be relatively self-sustaining

for the short span of five days after which it would require COSCOM (Corps Support Command) backup. The COSCOM would be tailored by slice to correspond to the size and expected needs of the air assault force deploying. COSCOM has to know the tactical concept and projected scenario so it can plan for the type of support it will have to provide.[57] An air assault task force is ammunition and fuel consumption intensive and would have minimal internal means of meeting its needs for water. Normally, COSCOM will throughput ammunition and fuel into the brigade support area. Air Force transported cargo, rigged for various modes of delivery, will be delivered as far forward as the brigade support area. The original design deletion of as many ground support vehicles as possible from the air assault TOE was predicated on the concept of throughputting supplies to the division or brigade support areas, or as far forward as the tactical situation would allow.[58]

> The logistic support concept for the original air assault division envisioned support being provided by the aerial transportation resources of an Air Transport Brigade. Without the Air Transport Brigade in support, and no organic vehicles to fill the void, the division is dependent upon significant theater augmentation to support internal logistic operations.[59]

Host nation support would be a key consideration in any logistics planning for support of a strategically deployed air assault force. In any case in which COSCOM support was provided, the FASCO (augmented as necessary) would provide the interface for the deployed brigade.[60]

SURVIVABILITY/VULNERABILITY (S/V)

The S/V subject has already been touched upon to some extent in describing the nature and practice of air assault operations. The high degree of mobility of air assault forces is gained in the first instance by trading off inherent self-protection and sustainability. The air

assault concept gives up armor protection and hitting and staying power to gain mobility, range of action, flexibility, speed, and surprise. Depending on the effectiveness of camouflage -- concealment -- dispersion -- friendly counter air operations -- and other factors, helicopters are constantly subject to destruction in laager areas by enemy artillery, tactical bombing and strafing, surface-to-surface missiles, raiding parties, saboteurs, and like variety of means. These may be looked upon, in no way tritely, as the ambient dangers of the battle environment. We are concerned here chiefly with helicopter tactical, inflight S/V in relation to enemy anti-helicopter capabilities. To put it another way, the tactical S/V of the operationally committed force once on the ground or during its continuum of operations (except when heliborne) is not the chief focus, but rather the S/V of the helicopters -- lift, attack, recon, support -- involved in moving these forces around the battlefield.

The enemy has a finite set of means to destroy helicopters ranging from the individual rifleman or machine-gunner, to concentrated air defense arrays of surface-to-air (SAM) missiles, shoulder fired infrared emission seeking missiles, air defense artillery with sophisticated aiming/tracking technology, killer helicopters such as the Hind-D used in the antihelicopter role, high performance aircraft, and electronic warfare systems used for target acquisition and jamming.

It is beyond the scope of this study to recount the hardware details of the Threat air defense spectrum. Field Manual 17-50 (Draft) puts the matter bluntly:

> Range, accuracy, and lethality of modern weapons tell us that any vehicle, aircraft, or unit that exposes itself on the battlefield will be destroyed unless enemy weapons have been:
> -- Destroyed
> -- Suppressed, or

-- Prevented from detecting and identifying the exposed element . . . .[61]

Survival is therefore a matter of hardware, tactics and techniques, training proficiency, and confidence in applying the first three. If these countermeasures are perfected well enough, the Threat air defense array is not impenetrable at all. In discussing helicopter S/V, FM 90-1 offers this reminder: "It must be remembered that no one on the battlefield can be killed by so many different weapons as the infantryman, and yet he survives through the use of proper tactics and techniques."[62] As FM 90-1 goes on to point out, survivability of helicopters in combat will depend on a host of factors including teamwork, terrain flying, surprise, COMSEC and OPSEC, accurate intelligence, night operations, effectiveness of the helicopter survivability suit, and fighting integrated as a member of the air assault team.[63]

Some examples of helicopter survivability in mid-intensity operations warrant brief mention. The Israelis conducted a highly successful air assault raid against Egyptian gun positions at Umm Kataff in June of 1967. Landing at night with total surprise right on the enemy position, the helicopters departed unscathed and the defenses were overrun by dawn. The Syrian Army captured Mount Hermon in a helicopter raid conducted early in the 1973 war. After a costly and unsuccessful Israeli ground attack had failed to retake Mount Hermon, an Israeli air assault finally retook the vital location on the Golan Heights just hours before the cease-fire of 22 October.[64] Just a few years previous to these events, Army helicopters had flown in what must be considered close approximation of mid-intensity war during operation LAMSON 719, an incursion into Laos by the South Vietnamese Army using US lift assets, in the spring of 1971. General Tolson observes that "With the exception

of enemy air, it could be said that the environment in Laos was as hostile and sophisticated as most of the probable areas of employment of U.S. forces throughout the world."[65] General Tolson cites observations on this operation made by Brigadier General Sidney B. Berry, Jr.:

> The helicopter and its crew have proven remarkably hardy and survivable in the mid-intensity conflict and hostile air defense environment of LAMSON 719. We have lost remarkably few helicopters and crew members in view of the heavy . . . fires our aircraft . . . have experienced while conducting . . . operations on NVA home ground . . . . To assess and evaluate properly our aircraft and crew losses, one must measure these losses against the campaign plan, mission, total sorties, and number of exposures to enemy fire, and accomplishments. When viewed in this perspective, we have fared better than the most optimistic prophet would have dared predict.[66]

According to General Tolson, "The general reaction of the Army aviator after LAMSON 719 was 'if we could pull this off under these conditions, we can do it anywhere in the world.'"[67] The LAMSON 719 loss rate for every thousand sorties was one quarter of one percent.[68] General Tolson considers it a myth that helicopters are so vulnerable as to make their use infeasible on the future battlefield:

> The key word for airmobile operations is "survivability," not "vulnerability." Survivability of air vehicles in the land battle is one end product of a combination of actions and reactions by two opposing forces . . . . The survivability of Army aircraft is enhanced by suppressive ground fire support, close air defense support, the proper use of intelligence for planning aviation operations . . . . Since Army aircraft operate in the ground environment, proven techniques of ground survival are available to them; and the most effective of these techniques is the coordinated use of all his capabilities by a commander on the scene. What is germane is the fact that the American soldier is more capable of carrying out his mission and more likely to survive in combat because he is airmobile.[69]

As mentioned earlier, survivability is enhanced by point and flank security, SEAD by attack helicopter and Air Force fighters, artillery using variable time fuse shells, EW, deception measures, and using weather and night conditions to advantage. Helicopter pilots stay out

of SAM radar envelopes. They go around known enemy ADA sights. Whenever possible they select routes over inaccessible terrain. They can thwart enemy tactical aircraft by practiced evasive maneuver. They know their infrared suppressor kit works on the UH-60 and AH1 or AH64. They have confidence in hot metal suppression and special paint to inhibit surface reflections. Repetitive passes through hostile corridors will be done only in emergency. Attack helicopters will go after hostile ADA to strip it out as soon as a flight is fired upon. Smoke and deception measures are also important. Pilots believe they can avoid the SAMs, Strellas, and suppress or fly around hostile air defense artillery. They are most concerned about the effects of machine guns on tanks and APCs, and individual enemy small arms fires at low level and NOE. Once again, enroute suppression, route selection, and flying tactics are key to managing this threat. They realize that exposure is the key determinant[70] in the S/V equation.

Lieutenant General Harry W. O. Kinnard (U.S. Army Retired), one of the world's foremost experts on the helicopter S/V issue, points out not only the importance of tactics and suppression to survivability but also the value of the technical improvements on the UH-60 and AH64. There is now an 85% reduction in combat damage a UH-60 would suffer as compared to a UH1 under identical circumstances, and the AH64 has "an even larger comparative advantage over the Cobra [AH1]."[71] He cites a helicopter loss rate (to all causes including accidents) in Vietnam from 1962 to 1972 of 4,643 helicopters or one every 3,166 flying hours. Then he draws a comparison between these losses, 4,643 helicopters, lost over a 10 year period, and the 4,644 tanks and armored personnel carriers lost by Egypt and Israel combined in the October 1973 war. He notes that in

19 days the opponents lost at a rate (4,644) of one greater than the U.S. Army's loss of helicopters (4,643) over a period of 10 years.[72] He than narrows the field of comparison to include only the LAMSON 719 helicopter losses sustained in operations against a strongly defended base area over a period of 61 days:

> . . . the Arab/Israeli armored vehicles were killed at six times the rate of our helicopters in LAMSON 719 . . . the loss rates sustained by the armored vehicles, if continued, would have consumed the entire force in 62 days; the loss rate of helicopters if sustained, would have consumed the entire force in 377 days.[73]

General Kinnard contends that the survivability built into the new generation of helicopters "makes them at least equal to fixed wing aircraft in that respect."[74] Elsewhere General Kinnard has observed that:

> At any rate my overall conclusion is that we now have a capability (and one which is constantly improving) to so degrade enemy ground based antihelicopter weapons as to permit not only the survival of our airmobile forces but to survive with the ability to be a major (perhaps the major) factor in defeating enemy armored formations.[75]

This short discussion on S/V was meant to lay bare the essentials of the controversy. It by no means was meant to settle the issue. It was intended to show that helicopter survivability, and concomitantly the tactical feasibility of air assault operations, depend on prioritized suppressive measures systematically imposed and intelligent tactics in making it difficult for the enemy to apply those air defense systems that cannot be suppressed.

ASSESSMENT

AirLand Battle 2000 -- or its evolutionary predecessors, the battlefields of the rest of the eighties and nineties of the high threat variety -- can only be predicted in the abstract. Except for Port Said,

LAMSON 719, Mount Hermon, and training, the air assault bullet, as it were, has never been fired at the high end of the threat spectrum. Technology has resulted in more pervasively lethal weapons and made it possible to combine them with the intelligence/target selection apparatus to apply these means of destruction. The stark possibility of having to fight in a NBC environment looms ominously over the future battlefield. As described in the opening chapter of this study, the vision of the battlefield of the 1990s and beyond is one of short duration, highly lethal mechanized battles, and resulting fluidity, discontinuity, and non-linearity — all abstractions which pose problems in the doctrine and organization necessary to apply the five functions of land combat in pursuit of the nation's aims. The vision is also one of smaller, self-contained combat commands operating with a degree of independence that will require the utmost in initiative, boldness, and flexibility on the part of commanders.

The importance of fighting the deep battle via the air dimension on these future battlefields has produced the employment charter for air assault forces contained in FM 100-5 and Division 86 Concept. But this is only one aspect of alternatives for such forces in the 1990s. It seems that we will always have a full plate of potential third world trouble spots. Strategic deployment into contingency areas worldwide therefore seems the most likely 1990s role for air assault forces. The survivability factor and tactical freedom of action improve markedly for air assault forces in the low-intensity environment; their suitability in the low-intensity environment is a matter of accepted historical record that does not require elaboration. Because of its tested utility and tactical success in Vietnam, and apparently in Afghanistan, the third

world, low-intensity conflict seems destined to remain the ideal battlefield for air assault forces. Unfortunately, suitability and necessity are not always consistent, and our examination has focused more fully on those options of necessity that may occur and the applicability of air assault forces for these contingencies. The impact of martial presence over extended area by air assault forces in the show-of-force role was emphasized. The 101st already has an identified contingency mission in the critical Southwest Asia Region (SWA), which could, obviously, become a mid-or-high intensity combat environment in the event actions passed beyond show-of-force to direct confrontation with the Soviets. This ultimate danger all the more compellingly points up the need to deploy a powerful force rapidly in the deterrent role.

The versatility, strengths, limitations, and practical considerations of air assault employment have been presented in this chapter. Interwoven in this discussion, and in earlier chapters, was a great deal about the importance of building teamwork and responsiveness through habitual association and total integration of aviation in training with ground combat and other air assault support elements. There is a crux issue involved here. If we are to contemplate a highly lethal and complex future battlefield, we must then own up to the necessity to organize and train air assault forces in the integrated manner and stop perpetuating the chimera that ad hoc arrangements will work on a mid-intensity battlefield. On such a battlefield (call it NATO, SWA, or Korea) the prediction can be made that air assault units, brigade and battalion task forces, will be operating from widely dispersed reserve areas and could possibly be executing and controlling cross-FLOT, deep battle missions at the same time they are on call for or committed to RAOO missions. Air assault forces are going to operate chiefly at night

on the 1990s battlefield; survivability dictates this and other common sense measures and tactics. These forces are going to use small formations to insert and extract quickly company and platoon teams in the conduct of deep battle raids. Both RAID and raid operations will be launched in response to real time intelligence targeting. There will be no time to train, little to task organize beyond the SOP configurations that have been practiced, and no latitude for flawed or cumbersome cooperation/coordination between air and ground units.

The mid-intensity role of employing air assault forces in a complementary manner with mech/armor forces declares itself vividly from the individual and written sources that inform this study. This employment role constitutes a classic case of "hold 'em by the nose and kick 'em in the pants" tactics. This role could involve link-up between attacking heavy forces and deep striking air assault forces. The link-up case is risky, puts a lot of aircraft into the air at one time, requires airhead style operations, and in planning must always balance cost with gain. General Tolson offers some reinforcing commentary on the complementary role of armor/air assault forces:

> In reviewing this volume [Airmobility, 1961-1971], I sense that I could have spent more time emphasizing the natural affinity of armor with an airmobile force. When the terrain and circumstances permit, armor and airmobility complement each other in a natural way to form an unbeatable team. Airmobility gives the commander unique capabilities in reconnaissance, maneuver, and logistics while the armor gives the shock and firepower which have characterized it in the past. Air cavalry and airmobile infantry can find and fix the enemy so that armored and mechanized forces can be brought in at the decisive moment to finish him.[76]

General Tolson also tells us that the air mobility concept is irreversible and that we should not let its real origins be obscured by its skewed form of tactical success in Vietnam.[77] Looking back to these

origins we are reminded that the Howze Board report recommended "an overall program for modernization of the Army that called for 5 Air Assault Divisions, 3 Air Cavalry Combat Brigades, and 5 Air Transport Brigades."[78]

Do we need to look back to this emphasis? The Army has veered from the path envisioned by the Howze Board and might be well advised to develop a zero sum mid-range alternative that would make a greater number of trained air assault brigades available to tactical commanders. The Land Battle Force[79] command and control headquarters, proposed for Airland Battle 2000 roles, would seem an ideal means to consolidate, relying on their air mobility, several of these brigades into a reserve aimed at striking a decisive blow "where the emergency exists" in a mid-intensity environment. The employment of air assault forces on this scale would be dictated by operational necessity and would not be undertaken unless the potential for success or requirement to act audaciously manifestly justified or demanded the risk.

The trend of employment for air assault forces visualized in this chapter is therefore one of wider availability of air assault brigade task forces which could break loose independent battalion task forces. Brigade and battalion headquarters would control even smaller sized operations. The preferred mode of tactical employment would be in those task organizations that employed but relatively few lift and tactical support aircraft at any one time. Modes of employment such as those static defense and delay operations which deprive the air assault unit of its mobility advantage are among the least preferred on the employment scale.

The methodology of this discussion has been to open a window

showing where the Army is trending in employment of air assault forces as we move toward the potential battlefield of the 1990s. History, theory, doctrinal charter, field practices, and the overarching question of helicopter survivability have been surfaced as the factors which shape the trends of how to use, or not use, air assault forces in the future. More consistency than inconsistency is evident in this evolution. The unrelenting quest for survivability mandates consistency, precision, and common sense in the development of employment roles. Besides survivability, weather and logistics have been pointed out as limiting extremes. The logistics limiting factor results in part from there no longer being an Air Transport Brigade, or adequate aerial resupply assets, to insure tactical logistics independence for air assault forces and should be considered in the argument for air assault qualified brigades in existing divisions, which already contain a ground oriented logistics apparatus. Weather (cf. note 75) as a limiting factor was not treated in an exhaustive manner because to do so is beyond the scope of this study. Research did not disclose a set of gaming data on weather that could provide planners with weather probabilities on helicopter operations, stratified by region, anywhere in the world on a given day of the year. A probability table of this kind would be valuable, but would require complex and lengthy computer-mathematics-Monte Carlo techniques.

CONCLUSIONS

Air mobility is important for the future because it could provide the critical maneuver differential for smaller synchronized forces, operating within the enemy's decision cycle,[80] to defeat larger forces. The "Lights" versus "Heavies" controversy will remain with us. In their

design, air assault organizations give up a lot to gain a lot. It is up to the tactical commander to employ such forces realistically and within the limits of their capabilities. The dangers of employing air assault forces at the higher ends of the threat spectrum have been discussed, and for that matter, are all too obvious. Air assault forces must train for the worst case — the high threat commitment. They are not the horse cavalry of World War I. The charter exists for the employment of air assault forces in the high threat environment as well as at the lower end of the Threat spectrum in various contingency roles.

History, theory, doctrine, trial and error training in the field (to include the fits and starts of learning to employ air assault units advantageously on Reforger 76) tell us how to prepare and train for the employment of air assault forces in the 1990s. The following list, with appropriate tags, summarizes the employment options distilled from this process:

— White Fleet -- Stress martial visibility, put in place rapidly. Show-of-force deterrence role capitalizing on rapid deployability and range of action of air assault forces. A brigade task force is the normal deploying configuration and requires COSCOM interface or long-line resupply from CONUS or other theater. Threat spectrum varies.

— Rumble Bees -- High threat environment, deep attack raid role, few helicopters in the air, select/perishable "soft" targets, night operations, 1990s feasibility depends on the technology of "electronic armor" advancing in favor of the helicopter. Operations controlled at brigade or battalion

headquarters.

— Hold-the-Nose, Kick-in-the-Pants — Complementary harassing role with armor/mech units, stresses Bumble Bee style operations unless deteriorating enemy defenses or tactical necessity dictate larger scale link-up operations. Multi-threat spectrum.

— Fight Fire with Fire — May be executed simultaneously with Bumble Bees. Rapid commitment to rear area combat operations to counter enemy air assault or airborne incursions. Size of friendly force would vary from company to multi-brigade under control headquarters. Multi-threat spectrum.

— Save the Titanic — Employ as a decisive reserve. Concentration "where the emergency exists" in a high threat environment, via air movement with little planning time, of brigade or multi-brigade force at a critically deteriorating point on the battlefield. Risks would be extreme, weather could prevent or cause serious delay, payoff could be exponential.

— Sink the Titanic — Exploitation, pursuit, encirclement of a retreating, disordered enemy force. Conducted on large and small scale and in complementary role with heavy forces under degraded high threat conditions.

— Thermopylae — A gap filler in extremis or a variation of Save the Titanic in which air assault units are put in place to defend critical passage or choke points. Size of force could vary from squad to multi-brigade. Emphasis would be on thickening anti-armor defenses with ground and air TOWs. Threat spectrum varies.

— A Force for All Seasons -- Air assault brigade(s) operate in third world areas, combine White Fleet and combat operations as necessary. Takes advantage of versatility and deployability of air assault forces. Low threat promotes wide freedom of action.

Reconnaissance, command and control support, aerial fire support, aerial resupply, economy of force, and protection and security roles would be integral to all of these options.

Air assault forces have employment options that fulfill emerging doctrine for the 1990s battlefield. These employment options in more conventional terms are listed in priority:

— Contingency roles in third-world areas in brigade task force groupings and employed across the full range of offense, defense, and retrograde operations under low-intensity conditions.

— Contingency show-of-force to Southwest Asia Area or as emergency reinforcement to deter the outbreak of hostilities in Korea. Acts as protection and expansion force for initial lodgement.

— Corps covering force in a contingency role in low-intensity environment.

— A NATO deep battle role emphasizing:

- A high density of small unit raids against time perishable enemy vulnerabilities.
- RACO operations conducted simultaneously with other combat commitments.
- A complementary battlefield role with mech/armor

of brigade and smaller size operations. Extent of role increases according to enemy air defense threat.

— A NATO emergency role using a large air assault force to block an enemy penetration or thicken anti-armor defenses in the face of dangerously deteriorating conditions at Corps or higher level.

CHAPTER IV

ENDNOTES

1. Basil Henry Liddell Hart, The Future of Infantry (London, 1933), p. 19.

2. Hart, p. 26.

3. FM 100-5, p. C-3. The primary source for Principles of War is FM 100-1, but a difference of wording exists. FM 100-1 uses the terms " . . . flexible application of combat power" (p. 15). FM 100-5 uses " . . . dynamic application. . . ." The iteration from the more current FM 100-5 was chosen.

4. FM 100-5, p. 6-13.

5. FM 100-5, p. 2-21.

6. Once the threat is postulated under war game METT (mission, enemy, terrain, troops available, time) conditions, defeat mechanisms are identified to accomplish the combat mission. These mechanisms, which derive from AirLand Battle 2000 terminology, may be looked upon as having three general orientations and purposes:

(1) Firepower-based, force disruption (artillery, battlefield air interdiction).
(2) Firepower-based, force destruction (combined arms, armor heavy forces engaged in the central battle).
(3) Manuever-based, force disruption (maneuver heavy deep attack).

7. FM 100-5, p. 2-2.

8. Michael Hickey, Out of the Sky: A History of Airborne Warfare. (New York, New York, 1979), p. 193.

9. Hickey, p. 195.

10. Hickey, p. 195.

11. John R. Galvin, Air Assault: The Development of Airmobile Warfare (New York, New York, 1969), pp. 262-3.

12. Galvin, p. 264.

13. Galvin, p. 264.

14. Hickey, p. 201.

15. Hickey, p. 215.

16. Galvin, pp. 276-277.

17. Galvin, p. 279.

18. Galvin, p. 279.

19. Hickey, p. 210.

20. Hickey, p. 211.

21. Hickey, p. 328.

22. U.S. Department of the Army, Air Assault in Action (Fort Campbell, KY, 1976), p. 5 (unnumbered).

23. To reduce confusion, the term "air assault" is substituted for the term "airmobile" used throughout FM 100-5.

24. FM 100-5, p. i.

25. FM 100-5, p. 1-6.

26. U.S. Department of the Army, FM 90-1, Employment of Army Aviation Units in a High Threat Environment, p. 2-1. (hereafter cited as FM 90-1).

27. FM 100-5, p. 2-1.

28. FM 100-5, p. 2-4.

29. John Wheldon, Machine Age Armies (London, 1968), p. 188.

30. U.S. Department of Defense Pamphlet, Soviet Military Power (Washington, 1981), pp. 27-29. A CACDA paper, Air Assault Antiarmor Brigade Concept (undated but ca 1978 or 79), proposes the rapid constitution of such a brigade task force from corps air assault assets. The force would move to blunt an enemy armor penetration or thicken antiarmor defense in the area of committed divisions. The idea is to apply additional combat power rapidly to a critical threat. Once again, responsiveness and combat effectiveness of ad hoc arrangements would seem unlikely. Fortunately, this concept draws its task force from experienced air assault elements.

31. U.S. Department of the Army, CACDA, Operational Concept for an Air Assault Division (Fort Leavenworth, 18 Nov 1981), pp. 5-6. (hereafter cited as Concept).

32. Concept, pp. 2-3.

33. Concept, p. 3.

34. Concept, p. 9.

35. Concept, p. B-5.

36. Concept, p. B-8.

37. Concept, p. B-3-4.

38. Concept, p. B-4.

39. Concept, P. B-5.

40. This division launched its own inaugural efforts in air assault methods after returning to the United States from Vietnam in 1972. At the leader and soldier level, it conducts intensive specialized training in air assault procedures/techniques at the Air Assault School, which awards its graduates a Department of the Army authorized Air Assault Badge.

41. For the Commander, Headquarters 101st Airborne Division (Air Assault) (Fort Campbell, KY), Letter, Subject: Reforger 76 Commander's Assessment, 16 Nov 1976, Inclosure 2, pp. 8-9 (hereafter cited 101st Assessment).

42. 101st Assessment, Incl. 2, p. 9. Paraphrase, not verbatim.

43. 101st Assessment, Incl. 2, pp. 9-10.

44. Richard S. Kotite, BG, US Deptment of the Army, Forces Command. (Ft. McPherson, Ga.), Letter to Major General John A. A. Wickham, 12 Nov 1976, w/incl: Assessment of the 101st Airborne Division (Air Assault) During Reforger 76, p. III-I. (This is a classified document. Only unclassified portions are cited or excerpted.) (hereafter cited FORSCOM Assessment.)

45. FORSCOM Assessment, p. IV-I.

46. FORSCOM Assessment, p. IV-II.

47. FORSCOM Assessment, p. IV-III.

48. There is also strong professional opinion in the 101st that ad hoc "airmobile" operations, based on training and preparation done after receipt of the mission on the battlefield, will prove disastrous. One officer gave the example of witnessing such a situation on a recent major training exercise. The "best" helicopter unit was married to the "best" infantry unit and given an air assault style mission. Neither unit having had experience in such operations, a completely botched operation ensued.

49. G. O. Speech, pp. 5-6.

50. G. O. Speech, p. 6.

51. G. O. Speech, pp. 7-8.

52. G. O. Speech, pp. 12-13.

53. Training in this regard can be misleading since the non-live-fire nature of training for the delay promotes a frequent unrealistic lack of wariness on the part of an advancing aggressor force.

54. Subject to weather and, naturally, other situation dependent factors including the precise nature of the air assault force mission in bringing the retreating enemy to bay. The air assault force must operate at significant depth to maintain its maneuver advantage. At too shallow a depth the enemy could cover or deny landing and pickup zones and rapidly reinforce or counterattack targets under attack. This situation was replicated during BRAVE SHIELD 80 at Fort Polk where the air assault options of the participating forces, one of which was the 101st, were minimized if not negated by a shallow maneuver area of less than 20 kilometers for a five day exercise involving a reinforced mechanized brigade and an air assault brigade.

55. G. O. Speech, p. 17. Night attacks could be carried out as deep as 100 kilometers behind enemy lines.

56. G. O. Speech, p. 29.

57. Unpublished Briefing Manuscript: Furnished by 101st DISCOM, 101st Airborne Division (AASLT) (Fort Campbell, KY, 1982), pp. 3-5, (hereafter cited DISCOM Manuscript).

58. FORSCOM Assessment, p. II-2.

59. FORSCOM Assessment, p. II-4.

60. DISCOM Manuscript, p. 7.

61. U.S. Department of the Army, FM 17-50, Attack Helicopter Operations, (DRAFT), p. 101.

62. FM 90-1, p. 2-3.

63. FM 90-1, pp. 2-23 thru 3-9; the interested reader is referred to page 3-9 of this manual for a matrix presentation in which virtually every possible type of tactical mission is given a numerical effectiveness rating measured in terms of aircraft capabilities and limiting factors.

64. Hickey, pp. 264-265.

65. John J. Tolson, LTG. Airmobility 1961-1971 (Washington, 1973), p. 245.

66. Tolson, p. 251.

67. Tolson, p. 252.

68. Tolson, p. 252.

69. Tolson, pp. 257-258.

70. The 101st Airborne Division (AASLT) provided two "How to Fight" video tapes. These tapes cover all aspects of air assault operations, but are especially helpful in gaining a basic, common-sense perspective of S/V. These tapes have been turned over to the United States Army War College.

71. Harry W. O. Kinnard, LTG (Ret). "Why Army Helicopters," Unpublished Manuscript (ca. Sept 1981), p. 5 (hereafter cited Kinnard Manuscript).

72. Kinnard Manuscript.

73. Kinnard Manuscript, p. 8.

74. Kinnard Manuscript, p. 11.

75. Harry W. O. Kinnard, LTG (Ret). "Airmobility Revisited, Part 2," Army Aviation (July 1980), pp. 10-11. Emphasis is original. In Part I of these articles (June 1980, p. 26), General Kinnard addresses another limiting factor, weather, as follows:

> [Air assault] commanders must gain the habit of thinking in terms of . . . micro weather. Helicopters can operate at such low ceiling/visibility limits (at reduced speeds) that the weather in a division commander's area is seldom — very seldom — unflyable throughout. . . . His attitude must be "we'll operate where we can, when we can." (Emphasis in original).

76. Tolson, p. 255.

77. Tolson, p. 253.

78. FORSCOM Assessment, p. II-1.

79. Annex B, p. B-4.

80. FM 100-5 emphasizes the importance of being able to respond faster than the enemy to battle opportunities. In his book, How To Make War (New York, 1982), p. 219, James F. Dunnigan reinforces this point:

> We all have limits. In sports, athletes outperform their less skillful opponents by preempting the latter's actions. A superior fighter, for example, doesn't just parry his opponent's punch, he gets one of his own in. A superior fighter operates within his opponents ability to respond. Skillful soldiers operate the same way.

CHAPTER V

RECOMMENDATIONS

The following recommendations derive from the preceding chapters and reflect those specific actions that appear necessary from certain conclusions of the study. The chapter references following each recommendation refer to those sections of the study that present the issues and discussions that inform a particular recommendation.

FORCE PACKAGING

-- Retain the 101st Air Assault Division (AASLT) as an air assault division as the continuing source for three discrete brigades or a division force, and as the test bed for air assault innovations and changes (Chapter II).

-- Create discrete air assault brigades in all existing light infantry divisions: 2d Infantry, 7th Infantry, 9th Infantry, 25th Infantry, and 82d Airborne (Chapter II).

-- Direct a study group to address the steps or procedures required to raise the combined arms proficiency of commissioned aviators to control and coordinate all aviation - related aspects of the air movement phase of all air assault operations (Chapters I, II).

-- Direct a study group to examine the compatibility of Division 86 force structure changes and the force structure requirements of Airland Battle 2000 (Chapters I, II).

— Substitute the phrase air assault for airmobile in FM 100-5 and subsequent military publications unless the intent is to describe the non-combat repositioning of forces using helicopters (Chapter I).

DEPLOYMENT

Air assault forces possess a significant mobility edge not found in any other combined arms team. This tactical mobility is complemented by a limited intratheater mobility that offers unique planning considerations for deployment planners and operators. Accordingly, the deployment priorities are based on a merger of tactical employment capabilities and the strategic lift requirements for air assault forces when measured against those other type forces that can accomplish the same mission when subjected to the same analysis. The following priority of deployment planning does not consider likelihood of requirement, but suitability for the task. The priorities are:

— Deploy brigade task forces to low-intensity, third world, contingencies in the following manner in priority (Chapter III):

  - o Single brigade task forces by USAF airlift.
  - o Multiple brigade task forces by USAF airlift and USN sealift.

— Deploy brigade task forces to mid-intensity, third world and developing or developed world contingencies in the following manner in priority (Chapter III):

  - o Single brigade task forces by USAF airlift.
  - o Multiple brigade task forces by USAF airlift and USN sealift.

— Deploy air assault division and multiple air assault brigades to mid-high intensity NATO environment in the following manner and priority (Chapter III):

- o Fighting elements of the brigade by USAF airlift.
- o Follow-on support and logistics by USN sealift.
- o Selected utility, medium lift, and attack helicopters by self-deployment.

EMPLOYMENT

Air assault forces from company team through division size, are capable of sustaining battle in all environments. There is, however, a preferred priority of employment for these forces that simultaneously optimizes their inherent strength and minimizes the vulnerabilities. In order, the priorities of employment with regard to suitability and not necessarily likelihood are:

— Employ air assault forces in low-intensity, third-world contingency conditions as follows (Chapter IV):

- o Full range of offensive operations involving company teams and battalion task forces.
- o Delay involving company teams and battalion task forces.
- o Defense operations only in the context of active displacement by helicopters to fulfill an economy of force requirement; i.e., limited air assault forces committed to a large detensive sector.

-- Employ air assault forces in mid-intensity, third world and developing or developed world contingencies as follows (Chapter IV):

- o Show-of-Force to reflect commitment and deterrence involving brigade task forces (Chapter III, IV).
- o Raids against suspected and identified targets involving company teams and battalion task forces.
- o Rear Area Combat Operations (RACO) involving company teams and battalion task forces.
- o Delay over extended distances involving company teams and battalion task forces.

— Employ air assault forces in the mid-high intensity, NATO extended battlefield, as follows (Chapter IV):

- o Raids against identified targets involving company teams and battalion task forces.
- o RACO involving company teams and battalion task forces.
- o Assault and seizure of key terrain or facilities by battalion and brigade task forces pending the completion of linkup operations.
- o Delay and defense operations in conjunction with mechanized and armor units to attack battlefield weaknesses or vulnerabilities in order to disrupt or destroy attaching enemy formations.

BIBLIOGRAPHY

Books

Dunnigan, James F. How to Make War: A Comprehensive Guide to Modern Warfare. New York: W. Morrow & Co., 1982.

Galvin, John R. Air Assault: The Development of Airmobile Warfare. New York: Hawthorn Books, Inc., 1969.

Hickey, Michael. Out of the Sky: A History of Airborne Warfare. New York: Scribner's, 1979.

Liddell Hart, Basil Henry. The Future of Infantry. London: Faber & Faber Ltd., 1933.

Tolson, John J., LTG, Department of the Army. Vietnam Studies: Airmobility 1961-1971. Washington: Government Printing Office, 1973.

Tugwell, Maurice. Airborne to Battle: A History of Airborne Warfare 1918-1971. London: William Kimber, 1971.

Wheldon, John. Machine Age Armies. London: Abelard-Schuman, 1968.

Institutional Report

Blechman, Barry M., et. al. Brookings Institution. Military Force as a Political Instrument Since the Second World War: Policy Implications. Technical Report Number 1. Washington: 1975 (N00014-75-C-0140).

Periodicals

Carlton, Paul K., Gen. U.S. Department of the Air Force. "Military Airlift for Strategic Mobility," Strategic Review, Vol. II, No. 1, Winter 1974, pp. 26-31.

De Haven, Oren E., LTG. U.S. Department of the Army. "Strategic Mobility: Shortfalls and Solutions," Defense 82, March 1982, pp. 11-15.

Fairweather Jr., Robert S. Col. "New Potential for the Attack Helicopter." Army. April 1982, pp. 42-45.

Kinnard, Harry W. O., LTG. "Airmobility Revisited, Part I," U.S. Army Aviation Digest (June 1980), 1-5, 26-27.

"AAH Special Issue: APACHE . . . Transitioning to Production." Army Aviation, 15 October 1981.

"Special January Feature: Today's AHIP Program." Army Aviation, 15 January 1982.

Newspapers

Tice, Jim. "Army Plans for Year 2000 Battles." Army Times (Washington) 24 February 1982, pp. 1, 28, 51.

Public Documents

U.S. Organization of the Joint Chiefs of Staff. United States Military Posture for FY 83. Washington: Gvoernment Printing Office, 1982.

Letters

Brandenburg, John M., MG. US Department of the Army, 101st Airborne Division (AASLT). The Air Assault Battalion Task Force: How to Fight. Fort Campbell: 1 May 1980, preface letter.

Cooley, Andrew L., BG. U.S. Joint Chiefs of Staff. Office of the J5 Plans directorate, Unpublished Memorandum for the Commanding General; Subject: "Some Observations for the Future." Fort Campbell: 29 June 1981. Memorandum written while BG Cooley was ADC(s) for the 101st Airborne Division (AASLT).

Kotite, Richard S., BG. U.S. Department of the Army, Headquarters Forces Command, Ft. McPherson, GA. Letter to Major General John A. Wickham, 12 Nov 1976 with inclosure: Assessment of the 101st Airborne Division (Air Assault) During Reforger 76. NOTE - This is a classified inclosure. All citations are from unclassified portions of the inclosure.

For the Commander, Headquarters 101st Airborne Division (Air Assault). Letter to Internal Distribution. Subject: Reforger 76 Commander's Assessment. 16 November 1976.

Field Manuals

U.S. Department of the Army. Army Field Manual 7-30: Infantry, Airborne, and Air Assault Brigade Operations. Washington: 24 April 1981.

U.S. Department of the Army. Army Field Manual 17-50 (Draft): Attack Helicopter Operations. Fort Knox: Local Reproduction, March 1982.

U.S. Department of the Army. Army Field Manual 90-1: Employment of Army Aviation Units in a High Threat Environment. Washington: U.S. Government Printing Office, September 1976.

U.S. Department of the Army. Army Field Manual 90-4: Airmobile Operations. Washington: 8 October 1980.

U.S. Department of the Army. Army Field Manual FM 100-5, Operations (Final Draft, dated 15 January 1982). Fort Leavenworth: September 1981.

U.S. Department of the Army. Field Army Manual 101-5-1: Operational Terms and Graphics. Washington: U.S. Government Printing Office, March 1980.

U.S. Department of the Army, 101st Airborne Division (AASLT). The Air Assault Battalion Task Force: How to Fight. Fort Campbell: 1 May 1980.

Pamphlets

U.S. Department of the Army. Headquarters 101st Airborne Division (Air Assault) and Fort Campbell. Pamphlet: Air Assault in Action. Local Reporduction, September 1976.

U.S. Department of the Army. U.S. Army Aviation Center and Fort Rucker. "Chapter 9. Strategic Deployment." Army Aviation Mission Area Analysis. Fort Rucker: undated, pp. 9-1 thru 9-58.

U.S. Department of the Army. U.S. Army Aviation Center and Fort Rucker. "Section III: Air Assault Division, Chapter 11. Organizations." Army Aviation Mission Area Analysis. Fort Rucker: Undated, pp. 11-59 thru 11-67.

U.S. Department of the Army. U.S. Army Command and General Staff College. RB1-1: Aviation. Fort Leavenworth: July 1981.

U.S. Department of the Army. U.S. Army War College. Military Sealift: Study Supplement. Carlisle Barracks: 5 October 1981.

U.S. Department of the Army. 101st Airborne Division (AASLT). Readiness Standing Operating Procedures (RSOP): Fort Campbell: 21 January 1982.

U.S. Department of the Army. U.S. Army Training and Doctrine Command. TRADOC Pamphlet 525-8: U.S. Army Aviation Self-Deployment. Fort Monroe: 6 March 1981.

U.S. Department of Defense. Soviet Military Power. Washington: U.S. Government Printing Office, October 1981.

Reports

U.S. Department of the Army, Combined Arms Center and Fort Leavenworth. Infantry Division 86: Feeder Report Draft. Fort Leavenworth: Undated.

Studies

U.S. Department of the Army. U.S. Army War College. Strategic Mobility War Game: Game Book Draft. Carlisle Barracks: 14 April 1982.

U.S. Department of the Army. U.S. Army War College. Strategic Mobility War Game: Planning Guide Draft. Carlisle Barracks: 14 April 1982.

Concept Papers

U.S. Department of the Army, Combined Arms Center and Fort Leavenworth. "Airland Battle 2000, Annex B: Command and Control Functional Concept," (Draft). Fort Leavenworth: 15 March 1982.

U.S. Department of the Army, Combined Arms Center and Fort Leavenworth. "Airland Battle 2000, Annex C: Close Combat Functional Concept," (Draft). Fort Leavenworth: 16 March 1982.

U.S. Department of the Army, Combined Arms Center and Fort Leavenworth. "Operational Concept for an Air Assault Division." Fort Leavenworth: 10 November 1981.

U.S. Department of the Army, Combined Arms Center and Fort Leavenworth. "Operational Concept for a Light Infantry Brigade." Fort Leavenworth: 17 March 1982.

U.S. Department of the Army, U.S. Army Armor Center and Fort Knox. Operational and Organizational Concept: Air Cavalry Attack Brigade. Fort Knox: November 1980.

U.S. Department of the Army, U.S. Army Armor Center. U.S. Army Armor School. U.S. Army Armor Reference Data in Three Volumes. Vol I: The Army Division. Fort Knox: 1981.

U.S. Department of the Army, U.S. Army Armor Center. U.S. Army Armor School. U.S. Army Armor Reference Data in Three Volumes, Vol III: Division 86 Organizations. Fort Knox: 1981.

U.S. Department of the Army. 101st Airborne Division (Air Assault). Concept Plan for Division Restructure. Fort Campbell: 1 May 1981.

Briefings

Kinnard, Harry W. O., Lieutenant General, USA (R). Why Army Helicopters. Unpublished Manuscript Article (ca. Sept. 1981).

Unpublished Briefing Chart: Furnished by G3 Division 101st Airborne Division (Air Assault). Fort Campbell, KY: 1982.

Unpublished Briefing Manuscript: Furnished by 101st DISCOM. 101st Airborne Division (Air Assault). Fort Campbell, KY: 1982.

U.S. Department of the Army. 101st Airborne Division (AASLT). How to Fight (Video Tapes, 2 parts). Fort Campbell: Local Reproduction, ca. Aug. 1981.

U.S. Department of the Army. Unpublished General Officer Speech Manuscript: 101st Airborne Division (Air Assault). Fort Campbell: 1982.

Interviews (Alphabetical by Rank)

Mackmull, Jack V., LTG. U.S. Department of the Army. XVIII Airborne Corps Commander, Fort Bragg: 23 March 1982. [Former Commander, 101st Airborne Division (AASLT), June 80-Jul 81.]

Bagnel, Charles W., MG. U.S. Department of the Army. 101st Airborne Division (AASLT) Commander, Fort Campbell: 22 March 1982.

Dyke, Charles W., MG. US Joint Chiefs of Staff, Office of the Vice Director. Washington: 22 March 1982. [Former Air Assault Brigade Commander, 101st Airborne Division (AASLT) March 75-Mar76.]

Bethke, Gerald, BG. U.S. Department of the Army. 101st Airborne Division (AASLT). ADC(S), Fort Campbell: 22 March 1982.

Cooley, Andrew L., BG. U.S. Joint Chiefs of Staff. Office of the J5 Plans Directorate. Washington: 22 March 1982. [Former ADC(S) of 101st Airborne division (AASLT), Dec 79-Jul 81.]

Dawkins, Peter M., BG. U.S. Department of the Army. Office of the Deputy Chief of Staff for Operations. Washington: 22 March 1982. [Former Air Assault Brigade Commander, 101st Airborne Division (AASLT), March 79-Sep 80.]

Ivey, Claude T., BG. U.S. Department of the Army. 101st Airborne Division (AASLT) ADC(O), Fort Campbell: 22 March 1982.

Dickinson, Kenneth, Col. U.S. Department of the Army. 82nd Airborne Division, Fort Bragg: 23 March 1982. [Current Commander, 2d Brigade, charged with proponency for air assault/airmobile developments for the division.]

Harrison, William, Col. U.S. Department of the Army. 101st Airborne Division (AASLT). Chief of Staff, Fort Campbell: 24 March 1982.

Luster, Albert B., Col. U.S. Department of the Army. 101st Airborne Division (AASLT) Commander, Division Support Command, Fort Campbell: 22 March 1982.

Ostovich, Rudolph J., Col. U.S. Department of the Army. Combined Arms Center, Combined Arms Center Director of Material Integration Directorate. Fort Leavenworth: 23 March 1982.

White, David, Col. U.S. Department of the Army. 101st Airborne Division (AASLT), Commander 2d Brigade, Fort Campbell: 23 March 1982.

Abbott, Michael H., LTC. U.S. Department of the Army. 101st Airborne Division (AASLT), Executive Officer, 101st Aviation Group, Fort Campbell: 23 March 1982.

Fender, Charles K., LTC. U.S. Department of the Army. Combat Development Agency, Project Officer for Strategic Deployment of Army Helicopters, Fort Rucker: 25-26 March 1982.

Hunter, William W., LTC. U.S. Department of the Army. 101st Airborne Division (AASLT), Deputy Chief of Staff, 101st Airborne Division (AASLT), Fort Campbell: 22-24 March 1981.

Mitchiner, M. E., LTC. U.S. Department of the Army. 82nd Airborne Division, Fort Bragg: 23 March 1982. [Army Aviator and current Commander, 82nd Combat Aviation Battalion.]

Pearson, Billy H., LTC. U.S. Department of the Army. XVIII Airborne Corps. Office of Assistant Chief of Staff, G3(Plans), Fort Bragg: 23 March 1982.

Redmond, Lawrence A., LTC. U.S. Department of the Army. XVIII Airborne Corps. Office of Assistant Chief of Staff, G3(Plans), Fort Bragg: 23 March 1982.

Tryon, Michael A., LTC. U.S. Department of the Army. Combat Development Agency, Studies Division, Ft. Benning: 25 March 1982.

Turecek, Jack, LTC. U.S. Department of the Army. 101st Airborne Division (AASLT). Office of the Assistant Chief of Staff, G3, Fort Campbell: 22 March 1982.

Young, Robert, LTC. U.S. Department of the Army. 101st Airborne Division (AASLT). Commander 2d Squadron 17th Cavalry, Fort Campbell: 23 March 1982.

Hess, Montie T., MAJ. U.S. Department of the Army. 82nd Airborne Division, Fort Bragg: 23 March 1982. [Current S3, 2d Brigade, charged with proponency for air assault/airmobile developments for the division.]

Johnson, Thomas M., MAJ. U.S. Department of the Army. Combined Arms Center Development Activity, Aviation Systems Officer, Combat Division, Material Integration Directorate, Fort Leavenworth: 22-23 March 1982.

Kotrlick, John J., MAJ. U.S. Department of the Army. The Armor School, Armor Aviation Directorate, Fort Knox: 25 March 1982.

Muendel, Edward. MAJ. U.S. Department of the Army. 101st Airborne Division (AASLT) 101st Aviation Group, Operations Officer (S-3), Fort Campbell: 23 March 1982.

Nix, Jack P. Jr., MAJ. U.S. Department of the Army, MILPERCEN. Washington: 24 March 1982. [Former Company Commander, Battalion S3 in air assault battalions, 101st Airborne Division (AASLT), March 76-Aug 79.

Young, Terry J., MAJ. U.S. Department of the Army, MILPERCEN. Washington: 24 March 1982. [Army Aviator, and former Company Commander, Battalion Assistant S3 in an air assault battalion, 101st Airborne Division (AASLT).]

DISTRIBUTION

Office of the Deputy Chief of Staff for Operations, Washington DC

Command and General Staff College, Fort Leavenworth, KS

US Army Armor Center, Fort Knox, KY

US Army Aviation Center, Fort Rucker, AL

US Army Infantry Center, Fort Benning, GA

XVIII Airborne Corps, Fort Bragg, NC

9th Infantry Division, Fort Lewis, WA

101st Airborne Division (AASLT), Fort Campbell, KY

Aviation Officer, 5th USA, Fort Sam Houston, TX